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EDITED BY ELLWOOD P. CUBBERLEY

PROFESSOR OF EDUCATION
LELAND STANFORD JUNIOR UNIVERSITY

DIVISION OF SECONDARY EDUCATION
UNDER THE EDITORIAL DIRECTION
OF ALEXANDER INGLIS

PROFESSOR OF EDUCATION
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"I have always thought that the chief object of education was to awaken the spirit, and that inasmuch as a literature whenever it has touched its great and highest notes was an expression of the spirit of mankind, the best induction into education was to feel the pulses of humanity which had beaten from age to age through the universities of men who had penetrated to the secrets of the human spirit." (WOODROW WILSON, *in acknowledging receipt of the Doctor's Degree from the University of Paris, Dec.* 21, 1918.)

"The study of the past begins to inspire us with new hopes for the future of humanity. The life which, viewed from without, seems in us, and thousands such as we, so petty and trivial, catches a new significance and even grandeur from the thought that it is not the isolated, transient thing we deemed it. We begin to perceive that no earnest effort for the good of humanity is ever lost, no life, however obscure, that has been devoted to the highest ends, to the service of mankind, to the progress of truth and goodness in the world, is ever spent in vain. For we think of them as contributions to a life which is not of to-day or yesterday, but of all time — a life which, never hasting, never resting, is through the ages ever advancing to its consummation." (JOHN CAIRD, *in an Address on "The Study of History" delivered at the University of Glasgow, November* 8, 1884. "*University Addresses*," p. 253.)

THE
HISTORY OF EDUCATION

EDUCATIONAL PRACTICE AND PROGRESS CONSIDERED AS A PHASE OF THE DEVELOPMENT AND SPREAD OF WESTERN CIVILIZATION

BY

ELLWOOD P. CUBBERLEY

PROFESSOR OF EDUCATION

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TO MY WIFE

FOR THIRTY YEARS

BEST OF COMPANIONS IN BOTH

WORK AND PLAY



PREFACE

THE present volume, as well as the companion volume of *Readings*, arose out of a practical situation. Twenty-two years ago, on entering Stanford University as a Professor of Education and being given the history of the subject to teach, I found it necessary, almost from the first, to begin the construction of a Syllabus of Lectures which would permit of my teaching the subject more as a phase of the history of the rise and progress of our Western civilization than would any existing text. Through such a study it is possible to give, better than by any other means, that vision of world progress which throws such a flood of light over all our educational efforts. The Syllabus grew, was made to include detailed citations to historical literature, and in 1902 was published in book form. In 1905 a second and an enlarged edition was issued,[1] and these volumes for a time formed the basis for classwork and reading in a number of institutions, and, though now out of print, may still be found in many libraries. At the same time I began the collection of a series of short, illustrative sources for my students to read.

It had been my intention, after the publication of the second edition of the Syllabus, to expand the outline into a Text Book which would embody my ideas as to what university students should be given as to the history of the work in which they were engaged. I felt then, and still feel, that the history of education, properly conceived and presented, should occupy an important place in the training of an educational leader. Two things now happened which for some time turned me aside from my original purpose. The first was the publication, late in 1905, of Paul Monroe's very comprehensive and scholarly *Text Book in the History of Education*, and the second was that, with the expansion of the work in education in the university with which I was connected, and the addition of new men to the department, the general history of education was for a time turned over to another to teach. I then began, instead, the development of that introductory course in education, dealing entirely with

[1] *Syllabus of Lectures on the History of Education, with Bibliographies.* 1st ed., 302 pp., illustrated, New York, 1902; 2d ed., with classified bibliographies, 358 pp., illustrated, New York, 1905.

American educational history and problems, out of which grew my *Public Education in the United States.*

The second half of the academic year 1910–11 I acted as visiting Lecturer on the History of Education at both Harvard University and Radcliffe College, and while serving in this capacity I began work on what has finally evolved into the present volume, together with the accompanying book of illustrative *Readings.* Other duties, and a deep interest in problems of school administration, largely engaged my energies and writing time until some three years ago, when, in rearranging courses at the university, it seemed desirable that I should again take over the instruction in the general history of education. Since then I have pushed through, as rapidly as conditions would permit, the organization of the parallel book of sources and documents, and the present volume of text.

In doing so I have not tried to prepare another history of educational theories. Of such we already have a sufficient number. Instead, I have tried to prepare a history of the progress and practice and organization of education itself, and to give to such a history its proper setting as a phase of the history of the development and spread of our Western civilization. I have especially tried to present such a picture of the rise, struggle for existence, growth, and recent great expansion of the idea of the improvability of the race and the elevation and emancipation of the individual through education as would be most illuminating and useful to students of the subject. To this end I have traced the great forward steps in the emancipation of the intellect of man, and the efforts to perpetuate the progress made through the organization of educational institutions to pass on to others what had been attained. I have also tried to give a proper setting to the great historic forces which have shaped and moulded human progress, and have made the evolution of modern state school systems and the world-wide spread of Western civilization both possible and inevitable.

To this end I have tried to hold to the main lines of the story, and have in consequence omitted reference to many theorists and reformers and events and schools which doubtless were important in their land and time, but the influence of which on the main current of educational progress was, after all, but small. For such omission I have no apology to make. In their place I have introduced a record of world events and forces, not included in

the usual history of education, which to me seem important as having contributed materially to the shaping and directing of intellectual and educational progress. While in the treatment major emphasis has been given to modern times, I have nevertheless tried to show how all modern education has been after all a development, a culmination, a flowering-out of forces and impulses which go far back in history for their origin. In a civilization such as we of to-day enjoy, with roots so deeply embedded in the past as is ours, any adequate understanding of world practices and of present-day world problems in education calls for some tracing of development to give proper background and perspective. The rise of modern state school systems, the variations in types found to-day in different lands, the new conceptions of the educational purpose, the rise of science study, the new functions which the school has recently assumed, the world-wide sweep of modern educational ideas, the rise of many entirely new types of schools and training within the past century — these and many other features of modern educational practice in progressive nations are better understood if viewed in the light of their proper historical setting. Standing as we are to-day on the threshold of a new era, and with a strong tendency manifest to look only to the future and to ignore the past, the need for sound educational perspective on the part of the leaders in both school and state is given new emphasis.

To give greater concreteness to the presentation, maps, diagrams, and pictures, as commonly found in standard historical works, have been used to an extent not before employed in writings on the history of education. To give still greater concreteness to the presentation I have built up a parallel volume of *Readings*, containing a large collection of illustrative source material designed to back up the historical record of educational development and progress as presented in this volume. The selections have been fully cross-referenced (**R. 129**; **R. 176**; etc.) in the pages of the Text. Depending, as I have, so largely on the companion volume for the necessary supplemental readings, I have reduced the chapter bibliographies to a very few of the most valuable and most commonly found references. To add to the teaching value of the book there has been appended to each chapter a series of questions for discussion, bearing on the Text, and another series of questions bearing on the Readings to be found in the companion volume. In this form it is hoped that the Text

will be found good in teaching organization; that the treatment may prove to be of such practical value that it will contribute materially to relieve the history of education from much of the criticism which the devotion in the past to the history of educational theory has brought upon it; and that the two volumes which have been prepared may be of real service in restoring the subject to the position of importance it deserves to hold, for mature students of educational practice, as the interpreter of world progress as expressed in one of its highest creative forms.

ELLWOOD P. CUBBERLEY

Stanford University, Cal.
September 4, 1920

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 Our most complete and scholarly history of education. This volume should be consulted freely. See analytical table of contents.

3. Munroe, Jas. P. *The Educational Ideal.* 262 pp. Boston, 1895.

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The most important Cyclopædia of Education in print. Contains excellent articles on all historical points and events, with good selected bibliographies. A work that should be in all libraries, and freely consulted in using this Text. Its historical articles are too numerous to cite in the chapter bibliographies, but, due to the alphabetical arrangement and good cross-referencing, they may be found easily.

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THE HISTORY OF EDUCATION



THE HISTORY OF EDUCATION

INTRODUCTION

THE SOURCES OF OUR CIVILIZATION

THE Civilization which we of to-day enjoy is a very complex thing, made up of many different contributions, some large and some small, from people in many different lands and different ages. To trace all these contributions back to their sources would be a task impossible of accomplishment, and, while specific parts would be interesting, for our purposes they would not be important. Especially would it not be profitable for us to attempt to trace the development of minor features, or to go back to the rudimentary civilizations of primitive peoples. The early development of civilization among the Chinese, the Hindoos, the Persians, the Egyptians, or the American Indians all alike present features which to some form a very interesting study, but our western civilization does not go back to these as sources, and consequently they need not concern us in the study we are about to begin. While we have obtained the alphabet from the Phœnicians and some of our mathematical and scientific developments through the medium of the Mohammedans, the real sources of our present-day civilization lie elsewhere, and these minor sources will be referred to but briefly and only as they influenced the course of western progress.

The civilization which we now know and enjoy has come down to us from four main sources. The Greeks, the Romans, and the Christians laid the foundations, and in the order named, and the study of the early history of our western civilization is a study of the work and the blending of these three main forces. It is upon these three foundation stones, superimposed upon one another, that our modern European and American civilization has been developed. The Germanic tribes, overrunning the boundaries of the Roman Empire in the fourth and fifth centuries, added another new force of largest future significance, and one

which profoundly modified all subsequent progress and development. To these four main sources we have made many additions in modern times, building an entirely new superstructure on the old foundations, but the groundwork of our civilization is composed of these four foundation elements. For these reasons a history of even modern education almost of necessity goes back, briefly at least, to the work and contributions of these ancient peoples.

Starting, then, with the work of the Greeks, we shall state briefly the contributions to the stream of civilization which have come down to us from each of the important historic peoples or groups or forces, and shall trace the blending and assimilating processes of the centuries. While describing briefly the educational institutions and ideas of the different peoples, we shall be far less concerned, as we progress down the centuries, with the educational and philosophical theories advanced by thinkers among them than with what was actually done, and with the lasting contributions which they made to our educational practices and to our present-day civilization.

The work of Greece lies at the bottom and, in a sense, was the most important of all the earlier contributions to our education and civilization. These people, known as Hellenes, were the pioneers of western civilization. Their position in the ancient world is well shown on the map reproduced opposite. To the East lay the older political despotisms, with their caste-type and intellectually stagnant organization of society, and to the North and West a little-known region inhabited by barbarian tribes. It was in such a world that our western civilization had its birth. These Greeks, and especially the Athenian Greeks, represented an entirely new spirit in the world. In place of the repression of all individuality, and the stagnant conditions of society that had characterized the civilizations before them, they developed a civilization characterized by individual freedom and opportunity, and for the first time in world history a premium was placed on personal and political initiative. In time this new western spirit was challenged by the older eastern type of civilization. Long foreseeing the danger, and in fear of what might happen, the little Greek States had developed educational systems in part designed to prepare their citizens for what might come. Finally, in a series of memorable battles, the Greeks, led by Athens, broke the dread power of the Persian name and made the future of this

new type of civilization secure. At Marathon, Salamis, and Platæa the fate of our western civilization trembled in the balance. Now followed the great creative period in Greek life, during which the Athenian Greeks matured and developed a literature, philosophy, and art which were to be enjoyed not only by themselves, but by all western peoples since their time. In these lines of culture the world will forever remain debtor to this small but active and creative people.



FIG. 1. THE EARLY GREEK CONCEPTION OF THE WORLD

The World according to Hecatæus, a geographer of Miletus, Asia Minor. Hecatæus was the first Greek traveler and geographer. The map dates from about 500 B.C.

The next great source of our western civilization was the work of Rome. Like the Greeks, the Romans also occupied a peninsula jutting southward into the Mediterranean, but in most respects they were far different in type. Unlike the active, imaginative, artistic, and creative Greeks, the Romans were a practical, concrete, unimaginative, and executive people. Energy, personality, and executive power were in greatest demand among them-

The work of Rome was political, governmental, and legal — not artistic or intellectual. Rome was strong where Greece was weak, and weak where Greece was strong. As a result the two peoples supplemented one another well in laying the foundations for our western civilization. The conquests of Greece were intellectual; those of Rome legal and governmental. Rome absorbed and amalgamated the whole ancient world into one Empire, to which she gave a common language, dress, manners, religion, literature, and political and legal institutions. Adopting Greek learning and educational practices as her own, she spread them throughout the then-known world. By her political organization she so fixed Roman ideas as to law and government throughout the Empire that Christianity built firmly on the Roman foundations, and the German barbarians, who later swept over the Empire, could neither destroy nor obliterate them. The Roman conquest of the world thus decisively influenced the whole course of western history, spread and perpetuated Greek ideas, and ultimately saved the world from a great disaster.

To Rome, then, we are indebted most of all for ideas as to government, and for the introduction of law and order into an unruly world. In all the intervening centuries between ancient Rome and ourselves, and in spite of many wars and repeated onslaughts of barbarism, Roman governmental law still influences and guides our conduct, and this influence is even yet extending to other lands and other peoples. We are also indebted to Rome for many practical skills and for important engineering knowledge, which was saved and passed on to Western Europe through the medium of the monks. On the other side of the picture, the recent great World War, with all its awful destruction of life and property, and injury to the orderly progress of civilization, may be traced directly to the Roman idea of world empire and the sway of one imperial government, imposing its rule and its culture on the rest of mankind.

Into this Roman Empire, united and made one by Roman arms and government, came the first of the modern forces in the ancient world — that of Christianity — the third great foundation element in our western civilization. Embracing in its early development many Greek philosophical ideas, building securely on the Roman governmental organization, and with its new message for a decaying world, Christianity forms the connecting link between the ancient and modern civilizations. Taking the

conception of one God which the Jewish tribes of the East had developed, Christianity changed and expanded this in such a way as to make it a dominant idea in the world. Exalting the teachings of the fatherhood of God, the brotherhood of man, the future life, and the need for preparation for a hereafter, Christianity introduced a new type of religion and offered a new hope to the poor and oppressed of the ancient world. In so doing a new ethical force of first importance was added to the effective energies of mankind, and a basis for the education of all was laid, for the first time, in the history of the world.

Christianity came at just the right time not only to impart new energy and hopefulness to a decadent ancient civilization, but also to meet, conquer, and in time civilize the barbarian hordes from the North which overwhelmed the Roman Empire. A new and youthful race of German barbarians now appeared upon the scene, with resulting ravage and destruction, and anarchy and ignorance, and long centuries ensued during which ancient civilization fell prey to savage violence and superstition. Progress ceased in the ancient world. The creative power of antiquity seemed exhausted. The digestive and assimilative powers of the old world seemed gone. Greek was forgotten. Latin was corrupted. Knowledge of the arts and sciences was lost. Schools disappeared. Only the Christian Church remained to save civilization from the wreck, and it, too, was almost submerged in the barbaric flood. It took ten centuries partially to civilize, educate, and mould into homogeneous units this heterogeneous horde of new peoples. During this long period it required the strongest energies of the few who understood to preserve the civilization of the past for the enjoyment and use of a modern world.

Yet these barbarian Germans, great as was the havoc they wrought at first, in time contributed much to the stream of our modern civilization. They brought new conceptions of individual worth and freedom into a world thoroughly impregnated with the ancient idea of the dominance of the State over the individual. The popular assembly, an elective king, and an independent and developing system of law were contributions of first importance which these peoples brought. The individual man and not the State was, with them, the important unit in society. In the hands of the Angles and Saxons, particularly, but also among the Celts, Franks, Helvetii, and Belgæ, this idea of individual freedom and of the subordination of the State to the individual has

borne large fruit in modern times in the self-governing States of France, Switzerland, Belgium, England and the English self-governing dominions, and in the United States of America. After much experimenting it now seems certain that the Anglo-Saxon type of self-government, as developed first in England and further expanded in the United States, seems destined to be the type of government in future to rule the world.

It took Europe almost ten centuries to recover from the effects of the invasion of barbarism which the last two centuries of the Roman Empire witnessed, to save itself a little later from Mohammedan conquest, and to pick up the lost threads of the ancient life and begin again the work of civilization. Finally, however, this was accomplished, largely as a result of the labor of monks and missionaries. The barbarians were in time induced to settle down to an agricultural life, to accept Christianity in name at least, and to yield a more or less grudging obedience to monk and priest that they might thereby escape the torments of a world to come. Slowly the monasteries and the churches, aided here and there by far-sighted kings, worked at the restoration of books and learning, and finally, first in Italy, and later in the nations evolved from the tribes that had raided the Empire, there came a period of awakening and rediscovery which led to the development of the early university foundations, a wonderful revival of ancient learning, a great expansion of men's thoughts, a great religious awakening, a wonderful period of world exploration and discovery, the founding of new nations in new lands, the reawakening of the spirit of scientific inquiry, the rise of the democratic spirit, and the evolution of our modern civilization.

By the end of the eleventh century it was clear that the long battle for the preservation of civilization had been won, but it was not until the fourteenth century that the Revival of Learning in Italy gave clear evidence of the rise of the modern spirit. By the year 1500 much had been accomplished, and the new modern questioning spirit of the Italian Revival was making progress in many directions. Most of the old learning had been recovered; the printing-press had been invented, and was at work multiplying books; the study of Greek and Hebrew had been revived in the western world; trade and commerce had begun; the cities and the universities which had arisen had become centers of a new life; a new sea route to India had been found and was in use; Columbus had discovered a new world; the Church was more tolerant

of new ideas than it had been for centuries; and thought was being awakened in the western world to a degree that had not taken place since the days of ancient Rome. The world seemed about ready for rapid advances in many directions, and great progress in learning, education, government, art, commerce, and invention seemed almost within its grasp. Instead, there soon opened the most bitter and vindictive religious conflict the world has ever known; western Christian civilization was torn asunder; a century of religious warfare ensued; and this was followed by other centuries of hatred and intolerance and suspicion awakened by the great conflict.

Still, out of this conflict, though it for a time checked the orderly development of civilization, much important educational progress was ultimately to come. In promulgating the doctrine that the authority of the Bible in religious matters is superior to the authority of the Church, the basis for the elementary school for the masses of the people, and in consequence the education of all, was laid. This meant the creation of an entirely new type of school — the elementary, for the masses, and taught in the native tongue — to supplement the Latin secondary schools which had been an outgrowth of the revival of ancient learning, and the still earlier cathedral and monastery schools of the Church.

The modern elementary vernacular school may then be said to be essentially a product of the Protestant Reformation. This is true in a special sense among those peoples which embraced some form of the Lutheran or Calvinistic faiths. These were the Germans, Moravians, Swedes, Norwegians, Finns, Danes, Dutch, Walloons, Swiss, Scotch, Scotch-Irish, French Huguenots, and the English Puritans. As the Renaissance gave a new emphasis to the development of secondary schools by supplying them with a large amount of new subject-matter and a new motive, so the Reformation movement gave a new motive for the education of children not intended for the service of the State or the Church, and the development of elementary vernacular schools was the result. Only in England, of all the revolting countries, did this Protestant conception as to the necessity of education for salvation fail to take deep root, with the result that elementary education in England awaited the new political and social and industrial impulses of the latter half of the nineteenth century for its real development.

The rise of the questioning and inferring spirit in the Italian

Renaissance marked the beginnings of the transition from mediæval to modern attitudes, and one of the most important outgrowths of this was the rise of scientific inquiry which in time followed. This meant the application of human reason to the investigation of the phenomena of nature, with all that this eventually implied. This, slowly to be sure, turned the energies of mankind in a new direction, led to the substitution of inquiry and patient experimentation for assumption and disputation, and in time produced a scientific and industrial revolution which has changed the whole nature of the older problems. The scientific spirit has to-day come to dominate all lines of human thinking, and the applications of scientific principles have, in the past century, completely changed almost all the conditions surrounding human life. Applied to education, this new spirit has transformed the instruction and the methods of the schools, led to the creation of entirely new types of educational institutions, and introduced entirely new aims and methods and purposes into the educational process.

From inquiry into religious matters and inquiry into the phenomena of nature, it was but a short and a natural step to inquiry into the nature and functions of government. This led to a critical questioning of the old established order, the rise of new types of intellectual inquiry, the growth of a consciousness of national problems, and the bringing to the front of questions of political interest to a degree unknown since the days of ancient Rome. The eighteenth century marks, in these directions, a sharp turning-point in human thinking, and the end of mediævalism and the ushering in of modern forms of intellectual liberty. The eighteenth century, too, witnessed a culmination of a long series of progressive changes which had been under way for centuries, and the flood time of a slowly but steadily rising tide of protest against the enslavement of the intellect and the limitation of natural human liberties by either Church or State. The flood of individualism which characterized the second half of the eighteenth century demanded outlet, and, denied, it rose and swept away ancient privileges, abuses, and barriers — religious, intellectual, social, and political — and opened the way for the marked progress in all lines which characterized the nineteenth century. Out of this new spirit was to come the American and the French Revolutions, the establishment of constitutional liberty and religious freedom, the beginnings of the abolition of privilege,

the rise of democracy, a great extension of educational advantages, and the transfer of the control of the school from the Church to the State that the national welfare might be better promoted thereby.

Now arose the modern conception of the school as the great constructive instrument of the State, and a new individual and national theory as to both the nature and the purpose of education was advanced. Schools were declared to be essentially civil affairs; their purpose was asserted to be to promote the common welfare and advance the interests of the political State; ministers of education began to be appointed by the State to take over and exercise control; the citizen supplanted the ecclesiastic in the organization of education and the supervision of classroom teaching; the instruction in the school was changed in direction, and in time vastly broadened in scope; and the education of all now came to be conceived of as a birthright of the child of every citizen.

Since the middle of the nineteenth century a great world movement for the realization of these new aims, through the taking-over of education from religious bodies and the establishment of state-controlled school systems, has taken place. This movement is still going on. Beginning in the nations which were earliest in the front of the struggle to preserve and extend what was so well begun by little Greece and Imperial Rome, the state-control conception of education has, in the past three quarters of a century, spread to every continent on the globe. For ages a Church and private affair, of no particular concern to government and of importance to but a relatively small number of the people, education has to-day become, with the rise and spread of modern ideas as to human freedom, political equality, and industrial progress, a prime essential to the maintenance of good government and the promotion of national welfare, and it is now so recognized by progressive nations everywhere. With the spread of the state-control idea as to education have also gone western ideas as to government, human rights, social obligations, political equality, pure and applied science, trade, industry, transportation, intellectual and moral improvement, and humanitarian influences which are rapidly transforming and modernizing not only less progressive western nations, but ancient civilizations as well, and along the lines so slowly and so painfully worked out by the inheritors of the conceptions of human free-

dom first thought out in little Greece, and those of political equality and government under law so well worked out by ancient Rome. Western civilization thus promises to become the dominant force in world civilization and human progress, with general education as its agent and greatest constructive force.

Such is a brief outline sketch of the history of the rise and spread and progress of our western civilization, as expressed in the history of the progress of education, and as we shall trace it in much more detail in the chapters which are to follow. The road that man has traveled from the days when might made right, and when children had no claims which the State or parents were bound to respect, to a time when the child is regarded as of first importance, and adults represented in the State declare by law that the child shall be protected and shall have abundant educational advantages, is a long road and at times a very crooked one. Its ups and downs and forward movements have been those of the progress of the race, and in consequence a history of educational progress must be in part a history of the progress of civilization itself. Human civilization, though, represents a more or less orderly evolution, and the education of man stands as one of the highest expressions of a belief in the improvability of the race of which mankind is capable.

It is such a development that we propose to trace, and, having now sketched the broader outlines of the treatment, we next turn to a filling-in of the details, and begin with the Ancient World and the first foundation element as found in the little City-States of ancient Greece.

PART I

THE ANCIENT WORLD

THE FOUNDATION ELEMENTS OF OUR WESTERN CIVILIZATION

GREECE — ROME — CHRISTIANITY



CHAPTER I

THE OLD GREEK EDUCATION

I. GREECE AND ITS PEOPLE

The land. Ancient Greece, or Hellas as the Greeks called their homeland, was but a small country. The map given below shows the Ægean world superimposed on the States of the old Northwest Territory, from which it may be seen that the Greek mainland was a little less than half as large as the State of Illinois. Greece proper was about the size of the State of West Virginia, but it was

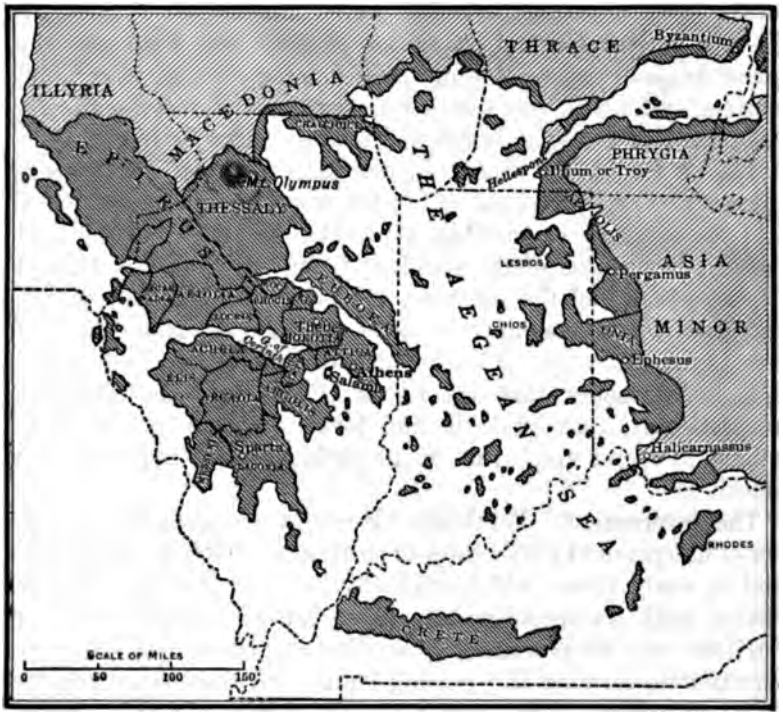


FIG. 2. ANCIENT GREECE AND THE ÆGEAN WORLD

Superimposed on the East-North-Central Group of American States, to show relative size. Dotted lines indicate the boundaries of the American States — Illinois, Indiana, Kentucky, etc. All of Greece will be seen to be a little less than half the size of the State of Illinois, the Ægean Sea about the size of the State of Indiana, and Attica not quite so large as two average-size Illinois counties.

a much more mountainous land. No spot in Greece was over forty miles from the sea. Attica, where a most wonderful intellectual life arose and flourished for centuries, and whose contributions to civilization were the chief glory of Greece, was smaller than two average-size Illinois counties, and about two thirds the size of the little State of Rhode Island.[1] The country was sparsely populated, except in a few of the City-States, and probably did not, at its most prosperous period, contain much more than a million and a half of people — citizens, foreigners, and slaves included.

The land was rough and mountainous, and deeply indented by the sea. The climate and vegetation were not greatly unlike the climate and vegetation of Southern California. Pine and fir on the mountain-slopes, and figs, olives, oranges, lemons, and grapes on the hillsides and plains below, were characteristic of the land. Fishing, agriculture, and the raising of cattle and sheep were the important industries. A temperate, bracing climate, short, mild winters, and a long, dry summer gave an opportunity for the development of this wonderful civilization. Like Southern California or Florida in winter, it was essentially an out-of-doors country. The high mountains to the rear, the sun-steeped skies, and the brilliant sea in front were alike the beauty of the land and the inspiration of the people. Especially was this true of Attica, which had the seashore, the plain, the high mountains, and everywhere magnificent views through an atmosphere of remarkable clearness. A land of incomparable beauty and charm, it is little wonder that the Greek citizen, and the Athenian in particular, took pride in and loved his country, and was willing to spend much time in preparing himself to govern and defend it.

The government. Politically, Greece was composed of a number of independent City-States of small size. They had been settled by early tribes, which originally held the land in common. Attica, with its approximately seven hundred square miles of territory, was an average-size City-State. The central city, the surrounding farming and grazing lands, and the coastal regions all taken together, formed the State, the citizens of which — city-residents, farmers, herdsmen, and fishermen — controlled the

[1] The average size of an Illinois county is 550 square miles, or an area 22×25 miles square. The State of West Virginia contains 24,022 square miles, and Rhode Island 1067 square miles. Rhode Island would be approximately 30×36 miles square, which would make Attica approximately 20×36 miles square in area.

government. There were in all some twenty of these City-States in mainland Greece, the most important of which were Attica, of which Athens was the central city; Laconia, of which Sparta was the central city; and Bœotia, of which Thebes was the central city. Some of the States developed democracies, of which class Athens became the most notable example, while some were governed as oligarchies. Of all the different States but few played any conspicuous part in the history of Greece. Of these few Attica stands clearly above them all as the leader in thought and art and the most progressive in government. Here, truly, was a most wonderful people, and it is with Attica that the student of the history of education is most concerned. The best of all Greece was there.

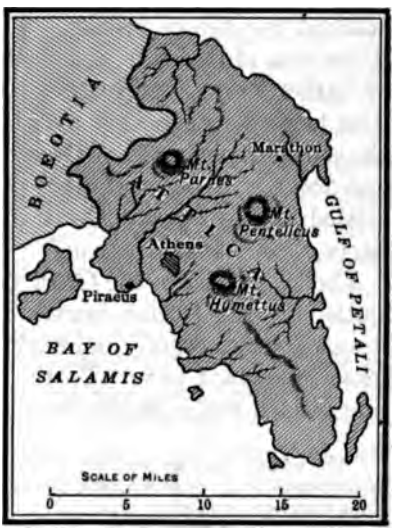


FIG. 3. THE CITY-STATE OF ATTICA

The little City-States of Greece, as has just been said, were independent States, just like modern nations. While all the Greeks regarded themselves as tribes of a single family, descended from a common ancestor, Hellen, and the bonds of a common race, language, and religion tended to unite them into a sort of brotherhood, the different City-States were held apart by their tribal origins, by narrow political sympathies, and by petty laws. A citizen of one city, for example, was an alien in another, and could not hold property or marry in a city not his own. Such attitudes and laws were but natural, the time and age considered.

Sometimes, in case of great danger, as at the time of the Persian invasions (492–479 B.C.), a number of the States would combine to form a defensive league; at other times they made war on one another. The federal principle, such as we know it in the United States in our state and national governments, never came into play. At different times Athens, Sparta, and Thebes aspired to the leadership of Greece and tried to unite the little States into a Hellenic Nation, but the mutual jealousies and the extreme indi-

vidualism of the people, coupled with the isolation of the States and the difficulties of intercommunication through the mountain passes, stood in the way of any permanent union.[1] What Rome later accomplished with relative ease and on a large scale, Greece was unable to do on even a small scale. A lack of capacity to unite for coöperative undertakings seemed to be a fatal weakness of the Greek character.

The people. The Greeks were among the first of the European peoples to attain to any high degree of civilization. Their story runs back almost to the dawn of recorded history. As early as 3500 B.C. they were in an advanced stone age, and by 2500 B.C. had reached the age of bronze. The destruction of Homer's Troy dates back to 1200 B.C., and the Homeric poems to 1100 B.C., while an earlier Troy (Schliemann's second city) goes back to 2400 B.C. This history concerns the mainland of Asia Minor. By 1000 B.C. the southern peninsula of Greece had been colonized, between 900 and 800 B.C. Attica and other portions of upper Greece had been settled, and by 650 B.C. Greek colonization had extended to many parts of the Mediterranean.[2]

The lower part of the Greek peninsula, known as Laconia, was settled by the Dorian branch of the Greek family, a practical, forceful, but a wholly unimaginative people. Sparta was their most important city. To the north were the Ionic Greeks, a many-sided and a highly imaginative people. Athens was their

[1] The nearest analogy we have to the Greek City-States exists in the local town governments of the New England States, particularly Massachusetts, and the local county-unit governmental organizations of a number of the Southern States, though in each of these cases we have a state and a federal government above to unify and direct and control these small local governments, which did not exist, except temporarily, in Greece.

If an area the size of West Virginia were divided into some twenty independent counties, which could arrange treaties, make alliances, and declare war, and which sometimes united into leagues for defense or offense, but which were never able to unite to form a single State, we should have a condition analogous to that of mainland Greece.

[2] A sea-faring people, the Greeks became to the ancient Mediterranean world what the English have been to the modern world. Southern Italy became so thickly set with small Greek cities that it was known as *Magna Græcia*. On the island of Sicily the city of Syracuse was founded (734 B.C.), and became a center of power and a home of noted Greeks. The city of Marseilles, in southern France, dates from an Ionic settlement about 600 B.C. The presence of another seafaring people, the Phœnicians, along the northern coast of Africa and southern and eastern Spain, probably checked the further spread of Greek colonies to the westward. The city of Cyrene, in northern Africa, dates from about 630 B.C. Greek colonists also went north and east, through the Dardanelles and on into the Black Sea. (See map, Figure 2.) Salonica and Constantinople date back to Greek colonization. Many of the colonies reflected great honor and credit on the motherland, and served to spread Greek manners, language, and religion over a wide area.

chief city. In the settlement of Laconia the Spartans imposed themselves as an army of occupation on the original inhabitants, whom they compelled to pay tribute to them, and established a military monarchy in southern Greece. The people of Attica, on the other hand, absorbed into their own body the few earlier settlers of the Attic plain. They also established a monarchy, but, being a people more capable of progress, this later evolved into a democracy. The people of Attica were in consequence a somewhat mixed race, which possibly in part accounts for their greater intellectual ability and versatility.[1]

It accounts, though, only in part. Climate, beautiful surroundings, and contact with the outside world probably also contributed something, but the real basis underneath was the very superior quality of the people of Attica. In some way, just how we do not know, these people came to be endowed with a superior genius and the rather unusual ability to make those progressive changes in living and government which enabled them to make the most of their surroundings and opportunities, and to advance while others stood still. Far more than other Greeks, the people of Attica were imaginative, original, versatile, adaptable, progressive, endowed with rare mental ability, keenly sensitive to beauty in nature and art, and possessed of a wonderful sense of proportion and a capacity for moderation in all things. Only on such an assumption can we account for their marvelous achievements in art, philosophy, literature, and science at this very early period in the development of the civilization of the world.

Classes in the population. Greece, as was the ancient world in general, was built politically on the dominant power of a ruling class. In consequence, all of course could not become citizens of the State, even after a democracy had been evolved. Citizenship came with birth and proper education, and, before 509 B.C., foreigners were seldom admitted to privileges in the State. Only a male citizen might hold office, protect himself in the courts, own land, or attend the public assemblies. Only a citizen, too, could participate in the religious festivals and rites, for religion was an affair of the ruling families of the State. In consequence, family, religion, and citizenship were all bound up together, and educa-

[1] It is the great mixed races that have counted for most in history. The strength of England is in part due to its wonderful mixture of peoples — Britons, Angles, Saxons, Jutes, Danes, Northmen, to mention only the more important earlier peoples which have been welded together to form the English people.

tion and training were chiefly for citizenship and religious (moral) ends.

Even more, citizenship everywhere in the earlier period was a degree to be attained to only after proper education and preliminary military and political training. This not only made some form of education necessary, but confined educational advantages to male youths of proper birth. There was of course no purpose in educating any others.[1] From Figure 4 it will be seen what a small percentage of the total population this included. Education in Greece was essentially the education of the children of the ruling class to perpetuate the rule of that class.

Attica almost alone among the Greek States adopted anything approaching a liberal attitude toward the foreign-born; in Sparta, and generally elsewhere in Greece, they were looked upon with deep suspicion. As a result most of the foreign residents of Greece were to be found in Athens, or its neighboring port city (the Piræus), attracted there by the hospitality of the people and the intellectual or commercial advantages of these cities. After Athens had become the center of world thought, many foreigners took up their residence in the city because of the importance of its intellectual life. Foreigners, though, they remained up to 509 B.C. (See page 40.) Only rarely before this date, and then only for some conspicuous act of patriotism, and by special vote of the citizens, was a foreigner admitted to citizenship. Unlike Rome, which received those of alien birth freely into its citizenship, and opened up to them large opportunities of every kind, the Greeks persistently refused to assimilate the foreign-born. Regarding themselves as a superior people, descended from the gods, they held themselves apart rather exclusively as above other peoples. This kept the blood pure, but, from the standpoint of world usefulness, it was a serious defect in Greek life.[2]

Beneath both citizens and foreign residents was a great foundation mass of working slaves, who rendered all types of menial and intellectual services. Sailors, household servants, field workers,

[1] Athens, however, permitted the children of foreigners to attend its schools, particularly in the later period of Athenian education.

[2] "When I compare the customs of the Greeks with these (the Romans), I can find no reason to extol either those of the Spartans, or the Thebans, or even of the Athenians, who value themselves the most for their wisdom; all who, jealous of their nobility and communicating to none or to very few the privileges of their cities . . . were so far from receiving any advantage from this haughtiness that they became the greatest sufferers by it." (Dionysius of Halicarnassus, in his *Roman Antiquities*, book II, chap. XVII.)

clerks in shops and offices, accountants, and pedagogues were among the more common occupations of slaves in Greece. Many of these had been citizens and learned men of other City-States or countries, but had been carried off as captives in some war. This was a common practice in the ancient world, slavery being the lot of alien conquered people almost without exception. The composition of Attica, just before the outbreak of the Peloponnesian War (431 B.C.) is shown in Figure 4. The great number of slaves and foreigners is clearly seen, even though the citizenship had by this time been greatly extended. In Sparta and in other City-States somewhat similar conditions prevailed as to numbers,[1] but there the slaves (Helots) occupied a lower status than in Athens, being in reality serfs, tied to and being sold with the land, and having no rights which a citizen was bound to respect.

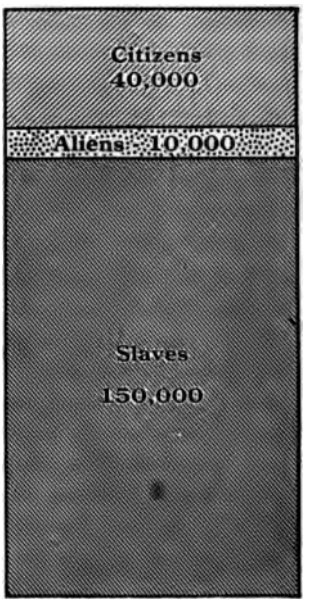


FIG. 4. DISTRIBUTION OF THE POPULATION OF ATHENS AND ATTICA, ABOUT 430 B.C. (After Gulick)

Education, then, being only for the male children of citizens, and citizenship a degree to be attained to on the basis of education and training, let us next see in what that education consisted, and what were its most prominent characteristics and results.

II. EARLY EDUCATION IN GREECE

Some form of education that would train the son of the citizen for participation in the religious observances and duties of a citizen of the State, and would prepare the State for defense against outward enemies, was everywhere in Greece recognized as a public necessity, though its provision, nature, and extent varied in the different City-States. We have clear information only as to Sparta and Athens, and will consider only these two as types. Sparta is interesting as representing the old Greek tribal training,

[1] In Sparta the number of citizens was still less. At the time of the formulation of the Spartan constitution by Lycurgus (about 850 B.C.) there were but 9000 Spartan families in the midst of 250,000 subject people. This disproportion increased rather than diminished in later centuries.

from which Sparta never progressed. Many of the other Greek City-States probably maintained a system of training much like that of Sparta. Such educational systems stand as undesirable examples of extreme state socialism, contributed little to our western civilization, and need not detain us long. It was Athens, and a few other City-States which followed her example, which presented the best of Greece and passed on to the modern world what was most valuable for civilization.

1. *Education in Sparta*

The people. The system of training which was maintained in Sparta was in part a reflection of the character of the people, and in part a result of its geographical location. A warlike people by nature, the Spartans were for long regarded as the ablest fighters in Greece. Laconia, their home, was a plain surrounded by mountains. They represented but a small percentage of the total population, which they held in subjection to them by their military power.[1] The slaves (Helots) were often troublesome, and were held in check by many kinds of questionable practices. Education for citizenship with the Spartans meant education for usefulness in an intensely military State, where preparedness was a prerequisite to safety. Strength, courage, endurance, cunning, patriotism, and obedience were the virtues most highly prized, while the humane, literary, and artistic sentiments were neglected (R. 1). Aristotle well expressed it when he said that "Sparta prepared and trained for war, and in peace rusted like a sword in its scabbard."

The educational system. At birth the child was examined by a council of elders (R. 1), and if it did not appear to be a promising child it was exposed to die in the mountains. If kept, the mother had charge of the child until seven if a boy, and still longer if a girl. At the beginning of the eighth year, and until the boy reached the age of eighteen, he lived in a public barrack, where he was given little except physical drill and instruction in the Spartan virtues. His food and clothing were scant and his bed hard. Each older man was a teacher. Running, leaping, boxing, wrestling, military music, military drill, ball-playing, the use of the spear, fighting, stealing, and laconic speech and demeanor con-

[1] The Austrian-Magyar combination, which held together and dominated the many tribes of the former Austro-Hungarian Empire, is an analogous modern situation, though on a much larger scale.

stituted the course of study. From eighteen to twenty was spent in professional training for war, and frequently the youth was publicly whipped to develop his courage and endurance. For the next ten years — that is, until he was thirty years old — he was in the army at some frontier post. At thirty the young man was admitted to full citizenship and compelled to marry, though continuing to live at the public barrack and spending his energies in training boys (R. 1). Women and girls were given gymnastic training to make them strong and capable of bearing strong children. The family was virtually suppressed in the interests of defense and war.[1] The intellectual training consisted chiefly in committing to memory the Laws of Lycurgus, learning a few selections from Homer, and listening to the conversation of the older men.

As might naturally be supposed, Sparta contributed little of anything to art, literature, science, philosophy, or government. She left to the world some splendid examples of heroism, as for example the sacrifice of Leonidas and his Spartans to hold the pass at Thermopylæ,[2] and a warning example of the brutalizing effect on a people of excessive devotion to military training. It is a pleasure to turn from this dark picture to the wonderful (for the time) educational system that was gradually developed at Athens.

2. *The old Athenian education*

Schools and teachers. Athenian education divides itself naturally into two divisions — the old Athenian training which prevailed up to about the time of the close of the Persian Wars (479 B.C.) and was an outgrowth of earlier tribal observances and practices, and later Athenian education, which characterized the

[1] Two Greek poems illustrate the Spartan mother, who was said to admonish her sons to come back with their shields, or upon them. The first is:

"Eight sons Dæmenta at Sparta's call
Sent forth to fight: one tomb received them all.
No tears she shed, but shouted, 'Victory!
Sparta, I bore them but to die for thee.'"

The second:

"A Spartan, his companion slain,
Alone from battle fled:
His mother, kindling with disdain
That she had borne him, struck him dead;
For courage and not birth alone
In Sparta testifies a son."

[2] "Go, tell at Sparta, thou that passest by,
That here, obedient to her laws, we lie."
(Epitaph on the three hundred who fell at Thermopylæ.)

period of maximum greatness of Athens and afterward. We shall describe these briefly, in order.

The state military socialism of Sparta made no headway in more democratic Attica. The citizens were too individualistic, and did their own thinking too well to permit the establishment of any such plan. While education was a necessity for citizenship, and the degree could not be obtained without it, the State nevertheless left every citizen free to make his own arrangements for the education of his sons, or to omit such education if he saw fit. Only instruction in reading, writing, music, and gymnastics were required. If family pride, and the sense of obligation of a parent and a citizen were not sufficient to force the father to educate his son, the son was then by law freed from the necessity of supporting his father in his old age. The State supervised education, but did not establish it.

The teachers were private teachers, and derived their livelihood from fees. These naturally varied much with the kind of teacher and the wealth of the parent, much as private lessons in music or dancing do to-day. As was common in antiquity, the teachers occupied but a low social position (R. 5), and only in the higher schools of Athens was their standing of any importance. Greek literature contains many passages which show the low social status of the schoolmaster.[1] Schools were open from dawn to dark. The school discipline was severe, the rod being freely used both in the school and in the home. There were no Saturday and Sunday holidays or long vacations, such as we know, but about ninety festival and other state holidays served to break the continuity of instruction (R. 3). The schoolrooms were provided by the teachers, and were wholly lacking in teaching equipment, in any modern sense of the term. However, but little was needed. The instruction was largely individual instruction, the boy coming, usually in charge of an old slave known as a *pedagogue*, to receive or recite his lessons. The teaching process was essentially a telling and a learning-by-heart procedure.

For the earlier years there were two schools which boys at-

[1] An Athenian saying, of a man who was missing, was: "Either he is dead or has become a schoolmaster." To call a man a schoolmaster was to abuse him, according to Epicurus. Demosthenes, in his attack on Æschines, ridicules him for the fact that his father was a schoolmaster in the lowest type of reading and writing school. "As a boy," he says, "you were reared in abject poverty, waiting with your father on the school, grinding the ink, sponging the benches, sweeping the room, and doing the duty of a menial rather thanl of a freeman's son." Lucian represents kings as being forced to maintain themseves in hell by teaching reading and writing.

tended — the music and literary school, and a school for physical training. Boys probably spent part of the day at one school and part at the other, though this is not certain. They may have attended the two schools on alternate days. From sixteen to eighteen, if his parents were able, the boy attended a state-supported *gymnasium*, where an advanced type of physical training was given. As this was preparatory for the next two years of army service, the *gymnasia* were supported by the State more as preparedness measures than as educational institutions, though they partook of the nature of both.



FIG. 5. A GREEK BOY

Early childhood. As at Sparta the infant was examined at birth, but the father, and not a council of citizens, decided whether or not it was to be "exposed" or preserved. Three ceremonies, of ancient tribal origin, marked the recognition and acceptance of the child. The first took place five days after birth, when the child was carried around the family hearth by the nurse, followed by the household in procession. This ceremony, followed by a feast, was designed to place the child forever under the care of the family gods. On the tenth day the child was named by the father, who then formally recognized the child as his own and committed himself to its rearing and education. The third ceremony took place at the autumn family festival, when all children born during the preceding year were presented to the father's clansmen, who decided, by vote, whether or not the boy or girl was the legitimate and lawful child of Athenian parents. If approved, the child's name was entered on the registry of the clan, and he might then aspire to citizenship and inherit property from his parent (**R.** 4).

Up to the age of seven both boys and girls grew up together in the home, under the care of the nurse and mother, engaging in much the same games and sports as do children anywhere. From the first they were carefully disciplined for good behavior and for the establishment of self-control (**R.** 3). After the age of seven the boy and girl parted company in the matter of their education, the girl remaining closely secluded in the home (women and chil-

dren were usually confined to the upper floor of the house) and being instructed in the household arts by her mother, while the boy went to different teachers for his education. Probably many girls learned to read and write from their mothers or nurses, and the daughters of well-to-do citizens learned to spin, weave, sew, and embroider. Music was also a common accomplishment of women.[1]

The school of the grammatist. A Greek boy, unlike a modern school child, did not go to one teacher. Instead he had at least two teachers, and sometimes three. To the *grammatist*, who was doubtless an evolution from an earlier tribal scribe, he went to learn to read and write and count. The grammatist represented the earliest or primary teacher. To the music teacher, who probably at first taught reading and writing also, he went for his instruction in music and literature. Finally, to the *palæstra* he went for instruction in physical training (**R. 3**).

Reading was taught by first learning the letters, then syllables, and finally words.[2] Plaques of baked earth, on which the alphabet was written, like the more modern horn-book (see Figure 130), were frequently used.[3] The ease with which modern children learn to read was unknown in Greece. Reading was very difficult to learn, as accentuation, punctuation, spacing between words, and small letters had not as yet been introduced. As a result the study required



FIG. 6. AN ATHENIAN INSCRIPTION

A decree of the Council and Assembly, dating from about 450 B.C. Note the difficulty of trying to read, without any punctuation, and with only capital letters.

[1] Women were not supposed to possess any of the privileges of citizenship, belonging rather to the alien class. They lived secluded lives, were not supposed to take any part in public affairs, and, if their husbands brought company to the house, they were expected to retire from view. In their attitude toward women the Greeks were an oriental rather than a modern or western people.

[2] "We learn first the names of the elements of speech, which are called *grammata;* then their shape and functions; then the syllables and their affections; lastly, the parts of speech, and the particular mutations connected with each, as inflection, number, contraction, accents, position in the sentence; then we begin to read and write, at first in syllables and slowly, but when we have attained the necessary certainty, easily and quickly." (Dionysius of Halicarnassus, *De Compos. Verb.* cap 25.)

[3] Fragments of a tile found in Attica have stamped upon them the syllables *ar, bar, gar; er, ber, ger;* etc. A bottle-shaped vase has also been found which, in addition to the alphabet, contains pronouncing exercises as follows:

bi-ba-bu-be	*zi-za-zu-ze*	*pi-pa-pu-pe*
gi-ga-gu-ge	*mi-ma-mu-me*	etc.

much time,[1] and much personal ingenuity had to be exercised in determining the meaning of a sentence. The inscription shown in Figure 6 will illustrate the difficulties quite well. The Athenian accent, too, was hard to acquire.

The pupil learned to write by first tracing, with the stylus, letters cut in wax tablets, and later by copying exercises set for him by his teacher, using the wax tablet and writing on his knee. Still later the pupil learned to write with ink on papyrus or parchment, though, due to the cost of parchment in ancient times, this was not greatly used. Slates and paper were of course unknown in Greece.

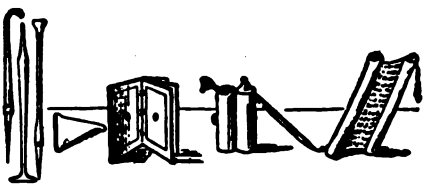


FIG. 7. GREEK WRITING-MATERIALS

There was little need for arithmetic, and but little was taught. Arithmetic such as we teach would have been impossible with their cumbrous system of notation.[2] Only the elements of counting were taught, the Greek using his fingers or a counting-board, such as is shown in Figure 8, to do his simple reckoning.

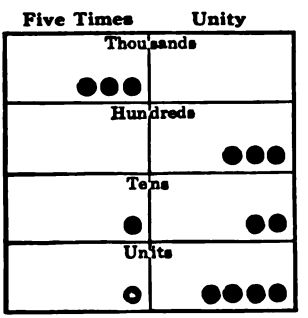


FIG. 8
A GREEK COUNTING-BOARD
Pebbles of different size or color were used for thousands, hundreds, tens, and units. Their position on the board gave them their values. The board now shows the total 15,379.

Great importance of reading and literature. After the pupil had learned to read, much attention was given to accentuation and articulation, in order to secure beautiful reading. Still more, in reading or reciting, the parts were acted out. The Greeks were a nation of actors, and the recitations in the schools and the acting in the theaters gave plenty of opportunity for expression. There were no schoolbooks, as we know them. The master dictated and the pupils wrote down, or, not uncom-

[1] "Learning to read must have been a difficult business in Hellas, for books were written only in capitals at this time. There were no spaces between the words, and no stops were inserted. Thus the reader had to exercise his ingenuity before he could arrive at the meaning of a sentence." (Freeman, K. J., *Schools of Hellas*, p. 87.)

[2] The Greeks had no numbers, but only words for numbers, and used the letters of the Greek alphabet with accents over them to indicate the words they knew as numbers. Counting and bookkeeping would of course be very difficult with such a system.

monly, learned by heart what the master dictated. Ink and parchment were now used, the boy making his own schoolbooks. Homer was the first and the great reading book of the Greeks, the *Iliad* and the *Odyssey* being the Bible of the Greek people. Then followed Hesiod, Theognis, the Greek poets, and the fables of Æsop.[1] Reading, declamation, and music were closely interrelated. To appeal to the emotions and to stir the will along moral and civic lines was a fundamental purpose of the instruction (R. 5). A modern writer well characterizes the ancient instruction in literature in the following words:

By making the works of the great poets of the Greek people the material of their education, the Athenians attained a variety of objects difficult of attainment by any other one means. The fact is, the ancient poetry of Greece, with its finished form, its heroic tales and characters, its accounts of peoples far removed in time and space, its manliness and pathos, its directness and simplicity, its piety and wisdom, its respect for law and order, combined with its admiration for personal initiative and worth, furnished, in the hands of a careful and genial teacher, a material for a complete education such as could not well be matched even in our own day. What instruction in ethics, politics, social life, and manly bearing could not find a fitting vehicle in the Homeric poems, not to speak of the geography, the grammar, the literary criticism, and the history which the comprehension of them involved? Into what a wholesome, unsentimental, free world did these poems introduce the imaginative Greek boy! What splendid ideals of manhood and womanhood did they hold up for his admiration and imitation! From Hesiod he would learn all that he needed to know about his gods and their relation to him and his people. From the elegiac poets he would derive a fund of political and social wisdom, and an impetus to patriotism, which would go far to make him a good man and a good citizen. From the iambic poets he would learn to express with energy his indignation at meanness, feebleness, wrong, and tyranny, while from the lyric poets he would learn the language suitable to every genial feeling and impulse of the human heart. And in reciting or singing all these, how would his power of terse, idiomatic expression, his sense of poetic beauty and his ear for rhythm and music be developed! With what a treasure of examples of every virtue and vice, and with what a fund of epigrammatic expression would his memory be furnished! How familiar he would be with the character and ideals of his nation, how deeply in sympathy with them! And all

[1] "These poems, especially Homer, Hesiod, and Theognis, served at the same time for drill in language and for recitation, whereby on the one hand the memory was developed and the imagination strengthened, and on the other the heroic forms of antiquity and healthy primitive utterances regarding morality, and full of homely common sense, were deeply engraved on the young mind. Homer was regarded not merely as a poet, but as an inspired moral teacher, and great portions of his poems were learned by heart. The *Iliad* and the *Odyssey* were in truth the Bible of the Greeks." (Laurie, S. S., *Pre-Christian Education*, p. 258.)



A Lesson in Music and Language

Explanation: At the right is the *paidagogos;* he is seated, and turns his head to look at his pupil, who is standing before his master. The latter holds a writing-tablet and a stylus; he is perhaps correcting a task. At the left a pupil is taking a music lesson. On the wall are hung a roll of manuscript, a folded writing-tablet, a lyre, and an unknown cross-shaped object.



A Lesson in Music and Poetry

Explanation: At the right sits, cross-legged, the *paidagogos*, who has just brought in his pupil. The boy stands before the teacher of poetry and recites his lesson. The master, in a chair, holds in his hand a roll which he is unfolding, upon which we see Greek letters. Above these three figures we see on the wall a cup, a lyre, and a leather case of flutes. To the bag is attached the small box containing mouth-pieces of different kinds for the flutes. Farther on a pupil is receiving a lesson in music. The master and pupil are both seated on seats without backs. The master, with head erect, looks at the pupil who, bent over his lyre, seems absorbed in his playing. Above are hanging a basket, a lyre, and a cup. On the wall is an inscription in Greek.

Fig. 9. An Athenian School

(From a cup discovered at Caere, signed by the painter Duris, and now in the Museum of Berlin)

this was possible even before the introduction of letters. With this event a new era in education begins. The boy now not only learns and declaims his Homer, and sings his Simonides or Sappho; he learns also to write down their verses from dictation, and so at once to read and to write. This, indeed, was the way in which these two (to us) fundamental arts were acquired. As soon as the boy could trace with his finger in sand, or scratch with a stylus on wax, the forms of the letters, and combine them into syllables and words, he began to write poetry from his master's dictation. The writing-lesson of to-day was the reading, recitation, or singing-lesson of to-morrow. Every boy made his own reading book, and, if he found it illegible, and stumbled in reading, he had only himself to blame. The Greeks, and especially the Athenians, laid the greatest stress on reading well, reciting well, and singing well, and the youth who could not do all three was looked upon as uncultured. Nor could he hide his want of culture, since young men were continually called upon, both at home and at more or less public gatherings, to perform their part in the social entertainment.[1]

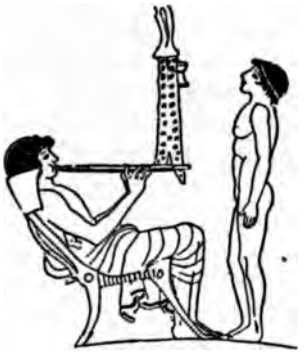
The music school. The teacher in this school gradually separated himself from the grammatist, and often the two were found in adjoining rooms in the same school. In his functions he succeeded the wandering poet or minstrel of earlier times. Music teachers were common in all the City-States of Greece. To this teacher the boy went at first to recite his poetry, and after the thirteenth year for a special music course. The teacher was known as a *citharist*, and the instrument usually used was the seven-stringed lyre. This resembled somewhat our modern guitar. The flute was also used somewhat, but never grew into much favor, partly because it tended to excite rather than soothe, and partly because of the contortions of the face to which its playing gave rise. Rhythm, melody, and the feeling for measure and time were important in instruction, whose office was to soothe, purge, and harmonize man within and make him fit for moral instruction through the poetry with which their music was ever associated. Instead of being a distinct art, as with us, and taught by itself, music with the Greeks was always subsidiary to the expression of the spirit of their literature, and in aim it was for moral-training ends.[2] Both Aristotle and Plato advocate state

[1] Davidson, Thos., *Aristotle*, pp. 73–75.

[2] Plutarch later expressed well the Greek conception of musical education in these words: "Whoever be he that shall give his mind to the study of music in his youth, if he meet with a musical education proper for the forming and regulating his inclinations, he will be sure to applaud and embrace that which is noble and generous, and to rebuke and blame the contrary, as well in other things as in what belongs to music. And by that means he will become clear from all reproachful actions, for now having reaped the noblest fruit of music, he may be of great use,

control of school music to insure sound moral results. Inferior as their music was to present-day music, it exerted an influence over their lives which it is difficult for an American teacher to appreciate.

The first lessons taught the use of the instrument, and the simple chants of the religious services were learned. As soon as the pupil knew how to play, the master taught him to render the works of the great lyric poets of Greece. Poetry and music to-



THE SINGING LESSON

The boy is singing, to the accompaniment of a flute. On the wall hangs a bag of flutes.



THE LITERATURE LESSON

The boy is reciting, while the teacher follows him on a roll of manuscript.

FIG. 10. GREEK SCHOOL LESSONS

gether thus formed a single art. At thirteen a special music course began which lasted until sixteen, but which only the sons of the more well-to-do citizens attended. Every boy, though, learned some music, not that he might be a musician, but that he might be musical and able to perform his part at social gatherings and participate in the religious services of the State. Professional playing was left to slaves and foreigners, and was deemed unworthy a free man and a citizen. Professionalism in either music or athletics was regarded as disgraceful. The purpose of both activities was harmonious personal development, which the Greeks believed contributed to moral worth.

The palæstra; gymnastics. Very unlike our modern education, fully one half of a boy's school life, from eight to sixteen, was given to sports and games in another school under different teach-

not only to himself, but to the commonwealth; while music teaches him to abstain from everything that is indecent, both in word and deed, and to observe decorum, temperance, and regularity." (Monroe, Paul, *History of Education*, p. 92.)

ers, known as the *palæstra*. The work began gradually, but by fifteen had taken precedence over other studies. As in music, harmonious physical development and moral ends were held to be of fundamental importance. The standards of success were far from our modern standards. To win the game was of little significance; the important thing was to do the part gracefully and, for the person concerned, well. To attain to a graceful and dignified carriage of the body, good physical health, perfect control of the temper, and to develop quickness of perception, self-possession, ease, and skill in the games were the aims — not mere strength or athletic prowess (**R. 2**). Only a few were allowed to train for participation in the Olympian games.

The work began with children's games, contests in running, and ball games of various kinds. Deportment — how to get up, walk, sit, and how to achieve easy manners — was taught by the masters. After the pupils came to be a little older there was a definite course of study, which included, in succession: (1) leaping and jumping, for general bodily and lung development; (2) running contests, for agility and endurance; (3) throwing the discus,[1] for arm exercise; (4) casting the javelin, for bodily poise and coördination of movement, as well as for future use in hunting; (5) boxing and wrestling, for quickness, agility, endurance, and the control of the temper and passions. Swimming and dancing were also included for all, dancing being a slow and graceful movement of the body to music, to develop grace of motion and beauty of form, and to exercise the whole human being, body and soul. The minuet and some of our folk-dancing are our nearest approach to the Greek type of dancing, though still not like it. The modern partner dance was unknown in ancient Greece.

The exercises were performed in classes, or in small groups. They took place in the open air, and on a dirt or sandy floor. They were accompanied by music — usually the flute, played by a paid performer. A number of teachers looked after the boys, examining them physically, supervising the exercises, directing the work, and giving various forms of instruction.

The gymnasial training, sixteen to eighteen. Up to this point the education provided was a private and a family affair. In the home and in the school the boy had now been trained to be a gentleman, to revere the gods, to be moral and upright according to Greek standards, and in addition he had been given that training

[1] A flat circle of polished bronze, or other metal, eight or nine inches in diameter.

in reading, writing, music, and athletic exercises that the State required parents to furnish. It is certain that many boys, whose parents could ill afford further expense for schooling, were allowed to quit the schools at from thirteen to fifteen. Those who expected to become full citizens, however, and to be a part of the government and hold office, were required to continue until twenty years of age. Two years more were spent in schooling, largely athletic, and two years additional in military service. Of this additional training, if his parents chose and could afford it, the State now took control.

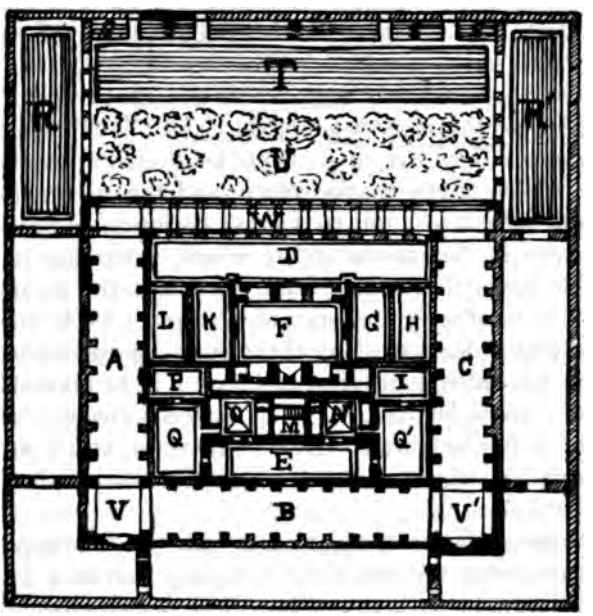


FIG. 11. GROUND-PLAN OF THE GYMNASIUM AT EPHESOS, IN ASIA MINOR

Explanation: *A*, *B*, *C*, pillared corridors, or portico; *D*, an open space, possibly a palæstra, evidently intended to supply the peristylium; *E*, a long, narrow hall used for games of ball; *F*, a large hall with seats; *G*, in which was suspended a sack filled with chaff for the use of boxers; *H*, where the young men sprinkled themselves with dust; *I*, the cold bath; *K*, where the wrestling-master anointed the bodies of the contestants; *L*, the cooling-off room; *M*, the furnace-room; *N*, the vapor bath; *O*, the dry-sweating apartment; *P*, the hot bath; *Q*, *Q'*, rooms for games, for the keepers, or for other uses; *R*, *R'*, covered *stadia*, for use in bad weather; *S*, *S*, *S*, *S*, *S*, rows of seats, looking upon *T*, the uncovered *stadium*; *U*, groves, with seats and walks among the trees; *V*, *V'*, recessed seats for the use of philosophers, rhetoricians, and others.

For the years from sixteen to eighteen the boy attended a state *gymnasium*, of which two were erected outside of Athens by the State, in groves of trees, in 590 B.C. Others were erected later in other parts of Greece. Figure 11 shows the ground plan of one of these *gymnasia*, and a study of the explanation of the plan will reveal the nature of these establishments. The boy now had for teachers a number of gymnasts of ability. The old exercises of the *palæstra* were continued, but running, wrestling, and boxing were much emphasized. The youth learned to run in armor, while wrestling and boxing became more severe. He also learned to ride a horse, to drive a chariot, to sing and dance in the public choruses, and to participate in the public state and religious processions.

Still more, the youth now passed from the supervision of a family pedagogue to the supervision of the State. For the first time in his life he was now free to go where he desired about the city; to frequent the streets, market-place, and theater; to listen to debates and jury trials, and to witness the great games; and to mix with men in the streets and to mingle somewhat in public affairs. He saw little of girls, except his sisters, but formed deep friendships with other young men of his age.[1] Aside from a requirement that he learn the laws of the State, his education during this period was entirely physical and civic. If he abused his liberty he was taken in hand by public officials charged with the supervision of public morals. He was, however, still regarded as a minor, and his father (or guardian) was held responsible for his public behavior.

The citizen-cadet years, eighteen to twenty. The supervision of the State during the preceding two years had in a way been joint with that of his father; now the State took complete control. At the age of eighteen his father took him before the proper authorities of his district or ward in the city, and presented him as a candidate for citizenship. He was examined morally and physically, and if sound, and if the records showed that he was the legitimate son of a citizen, his name was entered on the register of

[1] "There were no home influences in Hellas. The men-folk lived out of doors. The young Athenian from his sixth year onward spent his whole day away from home, in the company of his contemporaries, at school or palæstra, or in the streets. When he came home there was no home life. His mother was a nonentity, living in the woman's apartments; he probably saw little of her. His real home was the palæstra, his companions his contemporaries and his *paidagogos*. He learned to disassociate himself from his family and associate himself with his fellow citizens. No doubt he lost much by this system, but the solidarity of the State gained." (Freeman, K. J., *Schools of Hellas*, p. 282.)

his ward as a prospective member of it (**R. 4**). His long hair was now cut, he donned the black garb of the citizen, was presented to the people along with others at a public ceremony, was publicly armed with a spear and a shield, and then, proceeding to one of the shrines of the city, on a height overlooking it, he solemnly took the Ephebic oath:

> I will never disgrace these sacred arms, nor desert my companion in the ranks. I will fight for temples and public property, both alone and with many. I will transmit my fatherland, not only not less, but greater and better, than it was transmitted to me. I will obey the magistrates who may at any time be in power. I will observe both the existing laws and those which the people may unanimously hereafter make, and, if any person seek to annul the laws or to set them at naught, I will do my best to prevent him, and will defend them both alone and with many. I will honor the religion of my fathers. And I call to witness Aglauros, Enyalios, Ares, Zeus, Thallo, Auxo, and Hegemone.

He was now an *Ephebos*, or citizen-cadet, with still two years of severe training ahead of him before he could take up the full duties of citizenship. The first year he spent in and near Athens, learning to be a soldier. He did what recruits do almost everywhere — drill, camp in the open, learn the army methods and discipline, and march in public processions and take part in religious festivals. This first year was much like that of new troops in camp being worked into real soldiers. At the end of the year there was a public drill and inspection of the cadets, after which they were sent to the frontier. It was now his business to come to know his country thoroughly — its topography, roads, springs, seashores, and mountain passes. He also assisted in enforcing law and order throughout the country districts, as a sort of a state constabulary or rural police. At the end of this second year of practical training the second examination was held, the cadet was now admitted to full citizenship, and passed to the ranks of a trained citizen in the reserve army of defense, as does a boy in Switzerland to-day (**R. 4**).

Results under the old Greek system. Such was the educational system which was in time evolved from the earlier tribal practices of the citizens of old Athens. If we consider Sparta as representing the earlier tribal education of the Greek peoples, we see how far the Athenians, due to their wonderful ability to make progress, were able to advance beyond this earlier type of preparation for citizenship (**R. 5**). Not only did Athens surpass all

Greece, but for the first time in the history of the world, we find here, expressing itself in the education of the young, the modern western, individualistic and democratic spirit, as opposed to the deadening caste and governmental systems of the East. Here first we find a free people living under political conditions which favored liberty, culture, and intellectual growth, and using their liberty to advance the culture and the knowledge of the people (**R. 6**).

Here also we find, for the first time, the thinkers of the State deeply concerned with the education of the youth of the State, and viewing education as a necessity to make life worth living and secure the State from dangers, both within and without. To prepare men by a severe but simple and honest training to fear the gods, to do honest work, to despise comfort and vice, to obey the laws, to respect their neighbors and themselves, and to reverence the wisdom of their race, was the aim of this old education. The schooling for citizenship was rigid, almost puritanical, but it produced wonderful results, both in peace and in war.[1] Men thus trained guided the destinies of Athens during some two centuries, and the despotism of the East as represented by Persia could not defeat them at Marathon, Salamis, and Platæa.

The simple and effective curriculum. The simplicity of the curriculum was one of its marked features. In a manner seldom witnessed in the world's educational history, the Greeks used their religion, literature, government, and the natural activities of young men to impart an education of wonderful effectiveness.[2] The subjects we have valued so highly for training were to them unknown. They taught no arithmetic or grammar, no science, no drawing, no higher mathematics, and no foreign tongue. Music, the literature and religion of their own people, careful physical training, and instruction in the duties and practices of citizenship constituted the entire curriculum.

[1] "No doubt the Athenian public was by no means so learned as we moderns are; they were ignorant of many sciences, of much history, — in short of a thousand results of civilization which have since accrued. But in civilization itself, in mental power, in quickness of comprehension, in correctness of taste, in accuracy of judgment, no modern nation, however well instructed, has been able to equal by labored acquirements the inborn genius of the Greeks." (Mahaffy, J. P., *Old Greek Education.*)

[2] The great institutions of the Greek City-State were in themselves highly educative. The chief of these were:

1. The Assembly, where the laws were proposed, debated, and made.
2. The Juries, on which citizens sat and where the laws were applied.
3. The Theater, where the great masterpieces of Greek literature were performed.
4. The Olympian and other Games, which were great religious ceremonies of a literary as well as an athletic and artistic character, and to which Greeks from all over Hellas came.
5. The city life itself, among an inquisitive, imaginative, and disputatious people.

It was an education by doing; not one of learning from books. That it was an attractive type of education there is abundant testimony by the Greeks themselves. We have not as yet come to value physical education as did the Greeks, nor are we nearly so successful in our moral education, despite the aid of the Christian religion which they did not know. It was, to be sure, class education, and limited to but a small fraction of the total population. In it girls had no share. There were many features of Greek life, too, that are repugnant to modern conceptions. Yet, despite these limitations, the old education of Athens still stands as one of the most successful in its results of any system of education which has been evolved in the history of the world. Considering its time and place in the history of the world and that it was a development for which there were nowhere any precedents, it represented a very wonderful evolution.

QUESTIONS FOR DISCUSSION

1. Why are imaginative ability and many-sided natures such valuable characteristics for any people?
2. Why is the ability to make progressive changes, possessed so markedly by the Athenian Greeks, an important personal or racial characteristic?
3. Are the Athenian characteristics, stated in the middle of page 19, characteristics capable of development by training, or are they native, or both?
4. How do you explain the Greek failure to achieve political unity?
5. Would education for citizenship with us to-day possess the same defects as in ancient Greece? Why? Do we give an equivalent training?
6. Which is the better attitude for a nation to assume toward the foreigner — the Greek, or the American? Why?
7. Why does a state military socialism, such as prevailed at Sparta, tend to produce a people of mediocre intellectual capacity?
8. How do you account for the Athenian State leaving literary and musical education to private initiative, but supporting state *gymnasia*?
9. Would the Athenian method of instruction have been possible had all children in the State been given an education? Why?
10. How did the education of an Athenian girl differ from that of a girl in the early American colonies?
11. Why did the Greek boy need three teachers, whereas the American boy is taught all and more by one primary teacher?
12. Contrast the Greek method of instruction in music, and the purposes of the instruction, with our own.
13. How could we incorporate into our school instruction some of the important aspects of Greek instruction in music?
14. What do you think of the contentions of Aristotle and Plato that the State should control school music as a means of securing sound moral instruction?
15. Does the Greek idea that a harmonious personal development contributes to moral worth appeal to you? Why?

16. Contrast the Greek ideal as to athletic training with the conception of athletics held by an average American schoolboy.
17. Contrast the education of a Greek boy at sixteen with that of an American boy at the same age.
18. Contrast the emphasis placed on expression as a method in teaching in the schools of Athens and of the United States.
19. Do the needs of modern society and industrial life warrant the greater emphasis we place on learning from books, as opposed to the learning by doing of the Greeks?
20. Compare the compulsory-school period of the Greeks with our own. If we were to add some form of compulsory military training, for all youths between eighteen and twenty, and as a preparedness measure, would we approach still more nearly the Greek requirements?
21. Explain how the Athenian Greeks reconciled the idea of social service to the State with the idea of individual liberty, through a form of education which developed personality. Compare this with our American ideal.
22. The Greek schoolboy had no long summer vacation, as do American children. Is there any special reason why we need it more than did they?
23. Do we believe that virtue can be taught in the way the Hellenic peoples did? Do we carry such a belief into practice?

SELECTED READINGS

In the accompanying *Book of Readings* the following selections are reproduced:

1. Plutarch: Ancient Education in Sparta.
2. Plato: An Athenian Schoolboy's Life.
3. Lucian: An Athenian Schoolboy's Day.
4. Aristotle: Athenian Citizenship and the Ephebic Years.
5. Freeman: Sparta and Athens compared.
6. Thucydides: Athenian Education summarized.

QUESTIONS ON THE READINGS

1. Describe and characterize the Laws which Lycurgus framed for Spartan training (1).
2. Describe and characterize the instruction of the Irens at Sparta. Compare with the training given among the best of the American Indian tribes (1).
3. Contrast the type of education given an Athenian and a Spartan boy, as to nature and purpose and character (1 and 2).
4. What degree of State supervision of education is indicated by Plato (2)? By Freeman (5)?
5. Compare an Athenian school day as described by Lucian (3) with a school day in a modern Gary-type school.
6. Compare the Ephebic years of an Athenian youth (4) with those of a Spartan youth (1).
7. What were some of the chief defects of Athenian schools (5)?
8. What was the position of the State in the matter of the education of youth (5)?
9. What were the great merits of the Athenian educational and political system of training (6)?

(For SUPPLEMENTAL REFERENCES, see following chapter.)

CHAPTER II

LATER GREEK EDUCATION

III. THE NEW GREEK EDUCATION

Political events: The Golden Age of Greece. The Battle of Marathon (490 B.C.) has long been considered one of the "decisive battles of the world." Had the despotism of the East triumphed here, and in the subsequent campaign that ended in the defeat of the Persian fleet at Salamis (480 B.C.) and of the Persian army at Platæa (479 B.C.), the whole history of our western world would have been different. The result of the war with Persia was the triumph of this new western democratic civilization, prepared and schooled for great national emergencies by a severe but effective training, over the uneducated hordes led to battle by the autocracy of the East. This was the first, but not the last, of the many battles which western democracy and civilization has had to fight to avoid being crushed by autocracy and despotism. Marathon broke the dread spell of the Persian name and freed the more progressive Greeks to pursue their intellectual and political development. Above all it revealed the strength and power of the Athenians to themselves, and in the half-century following the most wonderful political, literary, and artistic development the world had ever known ensued, and the highest products of Greek civilization were attained. Attica had braved everything for the common cause of Greece, even to leaving Athens to be burned by the invader, and for the next fifty years she held the position of political as well as cultural preëminence among the Greek City-States. Athens now became the world center of wealth and refinement and the home of art and literature (**R. 7**), and her influence along cultural lines, due in part to her mastery of the sea and her growing commerce, was now extended throughout the Mediterranean world.

From 479 to 431 B.C. was the Golden Age of Greece, and "during this short period Athens gave birth to more great men — poets, artists, statesmen, and philosophers — than all the world beside had produced[1] in any period of equal length." Then,

[1] The culmination came in what is known as the Age of Pericles, who was the master mind at Athens from 459 to 431 B.C. During the fifth century B.C. such

largely as a result of the growing jealousy of military Sparta, came that cruel and vindictive civil strife, known as the Peloponnesian War, which desolated Greece, left Athens a wreck of her former self, permanently lowered the moral tone of the Greek people, and impaired beyond recovery the intellectual and artistic life of Hellas. For many centuries Athens continued to be a center of intellectual achievement, and to spread her culture throughout a new and a different world, but her power as a State had been impaired forever by a revengeful war between those who should have been friends and allies in the cause of civilization.

Transition from the old to the new. As early as 509 B.C. a new constitution had admitted all the free inhabitants of Attica to citizenship, and the result was a rapid increase in the prestige, property, and culture of Athens. Citizenship was now open to the commercial classes, and no longer restricted to a small, properly born, and properly educated class. Wealth now became important in giving leisure to the citizen, and was no longer looked down upon as it had been in the earlier period. After the Peloponnesian War the predominance of Attica among the Greek States, the growth of commerce, the constant interchange of embassies, the travel overseas of Athenian citizens, and the presence of many foreigners in the State all alike led to a tolerance of new ideas and a criticism of old ones which before had been unknown. A leisure class now arose, and personal interest came to have a larger place than before, with a consequent change in the earlier conceptions as to the duty of the citizen to the State. Literature lost much of its earlier religious character, and the religious basis of morality [1] began to be replaced by that of reason. Philosophy was now called upon to furnish a practical guide for life to replace the old religious basis. A new philosophy in which "man was the measure of all things" arose, and its teachers came to have large followings. The old search for an explanation of the world of matter [2] was now replaced by an attempt to explain the world of ideas and emotions, with a resulting evolution of the sciences of

names as Themistocles and Pericles in government, Phidias and Myron in art, Herodotus and Thucydides in historical narrative, Æschylus, Sophocles, and Euripides in tragic drama, and Aristophanes in comedy, graced Athens.

[1] With the Greeks, morality and the future life never had any connection.

[2] The early Greek philosophers tried to explain the physical world about them by trying to discover what they called the "first principle," from which all else had been derived. Thales (c. 624–548 B.C.), the father of Greek science, had concluded that water was the original source of all matter; Anaximenes (c. 588–524 B.C.), that air was the first principle; Heraclites (c. 525–475 B.C.), fire; and Pythagoras (c. 580–500 B.C.), number.

philosophy, ethics, and logic. It was a period of great intellectual as well as political change and expansion, and in consequence the old education, which had answered well the needs of a primitive and isolated community, now found itself but poorly adapted to meet the larger needs of the new cosmopolitan State.[1] The result was a material change in the old education to adapt it to the needs of the new Athens, now become the intellectual center of the civilized world.

Changes in the old education. A number of changes in the character of the old education were now gradually introduced. The rigid drill of the earlier period began to be replaced by an easier and a more pleasurable type of training. Gymnastics for personal enjoyment began to replace drill for the service of the State, and was much less rigid in type. The old authors, who had rendered important service in the education of youth, began to be replaced by more modern writers, with a distinct loss of the earlier religious and moral force. New musical instruments, giving a softer and more pleasurable effect, took the place of the seven-stringed lyre, and complicated music replaced the simple Doric airs of the earlier period. Education became much more individual, literary, and theoretical. Geometry and drawing were introduced as new studies. Grammar and rhetoric began to be studied, discussion was introduced, and a certain glibness of speech began to be prized. The citizen-cadet years, from sixteen to twenty, formerly devoted to rather rigorous physical training, were now changed to school work of an intellectual type.

New teachers; the Sophists. New teachers, known as Sophists, who professed to be able to train men for a political career,[2] began to offer a more practical course designed to prepare boys for the

[1] "There was now demanded ability to discuss all sorts of social, political, economic, and scientific or metaphysical questions; to argue in public in the marketplace or in the law courts; to declaim in a formal manner on almost any topic; to amuse or even instruct the populace upon topics of interest or questions of the day; to take part in the many diplomatic embassies and political missions of the times — the ability, in fact, to shine in a democratic society much like our own and to control the votes and command the approval of an intelligent populace where the function of printing-press, telegraph, railroad, and all modern means of communication were performed through public speech and private discourse, and where the legal, ecclesiastical, and other professional classes of teachers did not exist." (Monroe, Paul, *History of Education*, pp. 109–10.)

[2] The importance of a political career in the new Athens will be better understood if we remember that the influence on public opinion to-day exerted by the pulpit, bar, public platform, press, and scholar was then concentrated in the public speaker, and that the careers now open to promising youths in science, industry, commerce, politics, and government were then concentrated in the political career. It must also be remembered that the Greeks had always been a nation of speakers, both the content and the form of the address being important.

newer type of state service. These in time drew many Ephebes into their private schools, where the chief studies were on the content, form, and practical use of the Greek language. Rhetoric and grammar before long became the master studies of this new period, as they were felt to prepare boys better for the new political and intellectual life of Hellas than did the older type of training. In the schools of the Sophists boys now spent their time in forming phrases, choosing words, examining grammatical structure, and learning how to secure rhetorical effect. Many of these new teachers made most extravagant claims for their instruction (**R. 8**) and drew much ridicule from the champions of the older type of education, but within a century they had thoroughly established themselves, and had permanently changed the character of the earlier Greek education.

By 350 B.C. we find that Greek school education had been differentiated into three divisions, as follows:

1. *Primary education*, covering the years from seven or eight to thirteen, and embracing reading, writing, arithmetic, and chanting. The teacher of this school came to be known as a *grammatist.*
2. *Secondary education*, covering the years from thirteen to sixteen, and embracing geometry, drawing, and a special music course. Later on some grammar and rhetoric were introduced into this school. The teacher of this school came to be known as a *grammaticus.*
3. *Higher or university education*, covering the years after sixteen.

The flood of individualism. This period of artistic and intellectual brilliancy of Greece following the Peloponnesian War marked the beginning of the end of Greece politically. The war was a blow to the strength of Greece from which the different States never recovered. Greece was bled white by this needless civil strife. The tendencies toward individualism in education were symptomatic of tendencies in all forms of social and political life. The philosophers — Xenophon, Plato, and Aristotle — proposed ideal remedies for the evils of the State,[1] but in vain. The old ideal of citizenship died out. Service to the State be-

[1] Each of these philosophers proposed an ideal educational system designed to remedy the evils of the State. Xenophon (c. 410–362 B.C.), in his *Cyropædia*, purporting to describe the education of Cyrus of Persia, proposed a Spartan modification of the old Athenian system. Plato (429–348 B.C.), in his *Republic*, proposed an aristocratic socialism as a means of securing individual virtue and state justice. He first presents the super-civic man, an ideal destined for great usefulness among the Christians later on. Aristotle (384–322 B.C.), in his *Ethics*, and in his *Politics*, outlined an ideal state and a system of education for it.

came purely subordinate to personal pleasure and advancement. Irreverence and a scoffing attitude became ruling tendencies. Family morality decayed. The State in time became corrupt and nerveless. Finally, in 338 B.C., Philip of Macedon became master of Greece, and annexed it to the world empire which he and his son Alexander created. Still later, in 146 B.C., the new world power to the west, Rome, conquered Greece and made of it a Roman province.

Though dead politically, there now occurred the unusual spectacle of "captive Greece taking captive her rude conqueror," and spreading Greek art, literature, philosophy, science, and Greek ideas throughout the Mediterranean world. It was the Greek higher learning that now became predominant and exerted such great influence on the future of our world civilization. It remains now to trace briefly the development and spread of this higher learning, and to point out how thoroughly it modified the thinking of the future.

New schools; Socrates. In the beginning each Sophist teacher was a free lance, and taught what he would and in the manner he thought best. Many of them made extraordinary efforts to attract students and win popular approval and fees. Plato represents the Sophist Protagoras as saying, with reference to a youth ambitious for success in political life, "If he comes to me he will learn that which he comes to learn." At first the instruction was largely individual, but later classes were organized. Isocrates, who lived from 393 to 338 B.C., organized the instruction for the first time into a well-graded sequence of studies, with definite aims and work (**R. 8**). He shifted the emphasis in instruction from training for success in argumentation, to training to think clearly and to express ideas properly. His pupils were unusually successful, and his school did much to add to the fame of Athens as an intellectual center. From his work sprang a large number of so-called Rhetorical Schools, much like our better private schools and academies, offering to those Ephebes who could afford to attend a very good preparation for participation in the public life of the period.

In contrast with the Sophists, a series of schools of philosophy also arose in Athens. These in a way were the outgrowth of the work of Socrates. Accepting the Sophists' dictum that "man is the measure of all things," he tried to turn youths from the baser individualism of the Sophists of his day to the larger general

truths which measure the life of a true man. In particular he tried to show that the greatest of all arts — the art of living a good life — called for correct individual thinking and a knowledge of the right. "Know thyself" was his great guiding principle. His emphasis was on the problems of everyday morality. Frankly accepting the change from the old education as a change that could not be avoided, he sought to formulate a new basis for education in personal morality and virtue, and as a substitute for the old training for service to the State. He taught by conversation, engaging men in argument as he met them in the street, and showing to them their ignorance (**R. 9**). Even in Athens, where free speech was enjoyed more than anywhere else in the world at that time, such a shrewd questioner would naturally make enemies, and in 399 B.C. at the age of seventy-one, he was condemned to death by the Athenian populace on the charge of impiety and corrupting the youth of Athens.



FIG. 12
SOCRATES (469–399 B.C.)
(After a marble bust in the Vatican Gallery, at Rome)

Socrates' greatest disciple was a citizen of wealth by the name of Plato, who had abandoned a political career for the charms of philosophy, and to him we owe our chief information as to the work and aims of Socrates. In 386 B.C. he founded the Academy, where he passed almost forty years in lecturing and writing. His school, which formed a model for others, consisted of a union of teachers and students who possessed in common a chapel, library, lecture-rooms, and living-rooms. Philosophy, mathematics, and science were taught, and women as well as men were admitted.

Other schools of importance in Athens were the Lyceum, founded in 335 B.C. by a foreign-born pupil of Plato's by the name of Aristotle, who did a remarkable work in organizing the known knowledge of his time;[1] the school of the Stoics, founded by Zeno in 308 B.C.; and the school of the Epicureans, founded by Epicurus in 306 B.C. Each of these schools offered a philosophical solution

[1] "It is beyond all conception what that man espied, saw, beheld, remarked, observed." (Goethe.)
"One of the richest and most comprehensive geniuses that has ever appeared — a man beside whom no age has an equal to place." (Hegel.)
"Aristotle, Nature's private secretary, dipping his pen in intellect." (Eusebius.)

of the problem of life, and Plato and Aristotle wrote treatises on education as well. Each school evolved into a form of religious brotherhood which perpetuated the organization after the death of the master. In time these became largely schools for expounding the philosophy of the founder.

The University of Athens. Coincident with the founding of these schools and the political events we have previously recorded, certain further changes in Athenian education were taking place. The character of the changes in the education before the age of sixteen we have described. As a result in part of the development of the schools of the Sophists, which were in themselves only

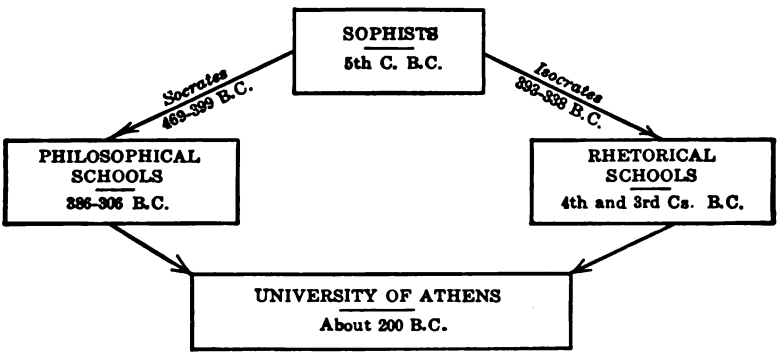


FIG. 13. EVOLUTION OF THE GREEK UNIVERSITY

attempts to meet fundamental changes in Athenian life, the education of youths after sixteen tended to become literary, rather than physical and military. The Ephebic period of service (from eighteen to twenty) was at first reduced from two years to one, and after the Macedonian conquest, in 338 B.C., when there was no longer an Athenian State to serve or protect, the entire period of training was made optional. The Ephebic corps was now opened to foreigners, and in time became merely a fashionable semi-military group. Instead of the military training, attendance at the lectures of the philosophical schools was now required, and attendance at the rhetorical schools was optional. Later the philosophical schools were granted public support by the Athenian Assembly, professorships were created over which the Assembly exercised supervision, the rhetorical and philosophical schools were gradually merged, the study years were extended from two to six, or seven, a form of university life as regards both students and

professors was developed, and what has since been termed "The University of Athens" was evolved. Figure 13 shows how this evolution took place.

As Athens lost in political power her citizens turned their attention to making their city a center of world learning. This may be said to have been accomplished by 200 B.C. Though Greece had long since become a Macedonian province, and was soon to pass under the control of Rome, the so-called University of Athens was widely known and much frequented for the next three hundred years, and continued in existence until finally closed, as a center of pagan thought, by the edict of the Roman-Christian Emperor, Justinian, in 529 A.D. Though reduced to the rank of a Roman provincial town, Athens long continued to be a city of letters and a center of philosophic and scientific instruction.

Spread and influence of Greek higher education. Alexander the Great rendered a very important service in uniting the western Orient and the eastern Mediterranean into a common world empire, and in establishing therein a common language, literature, philosophy, a common interest, and a common body of scientific knowledge and law. It was his hope to create a new empire, in which the distinction between European and Asiatic should pass away. No less than seventy cities were established with a view to holding his empire together. These served to spread Hellenic culture. Greek schools, Greek theaters, Greek baths, and Greek institutions of every type were to be found in practically all of them, and the Greek tongue was heard in them all. With Alexander the Great the history of Greek life, culture, and learning merges into that of the history of the ancient world. Everywhere throughout the new empire Greek philosophers and scientists, architects and artists, merchants and colonists, followed behind the Macedonian armies, spreading Greek civilization and becoming the teachers of an enlarged world.[1] "Greek cities stretched from the Nile to the Indus, and dotted the shores of the Black and the Caspian seas. The Greek language, once the tongue of a petty people, grew to be a universal language of culture, spoken even by barbarian lips, and the art, the science, the literature, the principles of politics and philosophy, developed in isolation

[1] "As Alexander passed conquering through Asia, he restored to the East, as garnered grain, that Greek civilization whose seeds had long ago been received from the East. Each conqueror in turn, the Macedonian and the Roman bowed before conquered Greece and learnt lessons at her feet." (Butcher, S. H., *Some Aspects of the Greek Genius*, p. 43.)

by the Greek mind, henceforth became the heritage of many nations." [1]

Greek universities were established at Pergamum and Tarsus in Asia Minor; at Rhodes on the island of that name in the Ægean; and at the newly founded city of Alexandria in Egypt. Antioch, in Syria, became another important center of Greek influence and learning. A large library was developed at Pergamum, and it was here that writing on prepared skins of animals [2] was begun, from which the term "parchment" (originally "pergament") comes. It was also at Pergamum that Galen (born c. 130 A.D.) organized what was then known of medical science, and his work remained the standard treatise for more than a thousand years. Rhodes became a famous center for instruction in oratory. During Roman days many eminent men, among whom were Cassius, Cæsar, and Cicero, studied oratory here.



FIG. 14
THE GREEK UNIVERSITY WORLD

Mingling of Orient and Occident at Alexandria. The most famous of all these Greek institutions, however, was the University of Alexandria, which gradually sapped Athens as a center of learning and became the intellectual capital of the world. The greatest library of manuscripts the world had ever known was collected together here.[3] It is said to have numbered over 700,000 volumes. These included Greek, Jewish, Egyptian, and Oriental works. In connection with the library was the museum, where men of letters and investigators were supported at royal expense. These two constituted an institution so like a university that it has been given that name. Alexandria became not only a

[1] Webster, D. H., *Ancient History*, p. 302.

[2] Previous to this, paper had been made from the papyrus plant, but Egypt, having forbidden its export, necessity again became the mother of invention.

[3] With this exception, never before the Italian Renaissance was there such interest in collecting books. Almost every book written in antiquity was gathered here, and the library at Alexandria became the British Museum or the Bibliothèque Nationale of the ancient world. Every book entering Egypt was required to be brought to this library.

great center of learning, but, still more important, the chief mingling place for Greek, Jew, Egyptian, Roman, and Oriental, and here Greek philosophy, Hebrew and Christian religion, and Oriental faith and philosophy met and mixed. It was this mingled civilization and culture, all tinged through and through with the Greek, with which the Romans came in contact as they pushed their conquering armies into the eastern Mediterranean (**R. 10**).

Character of Alexandrian Learning. The great advances in knowledge made at Alexandria were in mathematics, geography, and science. The method of scientific investigation worked out by Aristotle at Athens was introduced and used. Instead of speculating as to phenomena and causes, as had been the earlier Greek practice, observation and experiment now became the rule.



FIG. 15. THE KNOWN WORLD ABOUT 150 A.D.

A map by Ptolemy, geographer and astronomer at Alexandria. Compare this with the map on page 4, and note the progress in geographical discovery which had been made during the intervening centuries.

Euclid (c. 323–283 B.C.) opened a school at Alexandria as early as 300 B.C., and there worked out the geometry which is still used in our schools. Archimedes (287–212 B.C.), who studied under Euclid, made many important discoveries and advances in mechanics and physics. Eratosthenes (226–196 B.C.), librarian at Alexandria, is famous as a geographer [1] and astronomer, and made

[1] He founded the science of geography. Before his time Greek students had concluded that the world was round, instead of flat, as stated in the Homeric poems. By careful measurements he determined its size, within a few thousand miles of its actual circumference, and predicted that one might sail from Spain to the Indies along the same parallel of latitude.

some studies in geology as well. Ptolemy (b. ?; d. 168 A.D.) here completed his Mechanism of the Heavens (*Syntaxis*) in 138 A.D., and this became the standard astronomy in Europe for nearly fifteen hundred years, while his geography was used in the schools until well into the fifteenth century. The map of the known world, shown in Figure 15, was made by him. Hipparcus, the Newton of the Greeks, studied the heavens both at Alexandria and Rhodes, and counted the stars and arranged them in constellations. Many advances also were made in the study of medicine, the Alexandrian schools having charts, models, and dissecting rooms for the study of the human body. The functions of the brain, nerves, and heart were worked out there.

Except in science and mathematics, though, the creative ability of the earlier Greeks was now largely absent. Research, organization, and comment upon what had previously been done rather was the rule. Still much important work was done here. Books were collected, copied, and preserved, and texts were edited and purified from errors. Here grammar, criticism, prosody, and mythology were first developed into sciences. The study of archæology was begun, and the first dictionaries were made. The translation of the Hebrew Scriptures into Greek was begun for the benefit of the Alexandrian Jews who had forgotten their mother tongue, this being the origin of the famous *Septuagint* [1] version of the Old Testament. It is owing to these Alexandrian scholars, also, that we now possess the theory of Greek accents, and have good texts of Homer and other Greek writers.

Alexandria sapped in turn. In 30 B.C. Alexandria, too, came under Roman rule and was, in turn, gradually sapped by Rome. Greek influence continued, but the interest became largely philosophical. Ultimately Alexandria became the seat of a metaphysical school of Christian theology, and the scene of bitter religious controversies. In 330 A.D., Constantinople was founded on the site of the earlier Byzantium, and soon thereafter Greek scholars transferred their interest to it and made it a new center of Greek learning. There Greek science, literature, and philosophy were preserved for ten centuries, and later handed back to a Europe just awakening from the long intellectual night of the Middle Ages. In 640 A.D. Alexandria was taken by the Mohammedans, and the university ceased to exist. The great library was destroyed, furnishing, it is said, "fuel sufficient for four thousand

[1] From the tradition that seventy scholars labored on it.

public baths for a period of six months," and Greek learning was extinguished in the western world.

Our debt to Hellas. As a political power the Greek States left the world nothing of importance. As a people they were too individualistic, and seemed to have a strange inability to unite for political purposes. To the new power slowly forming to the westward — Rome — was left the important task, which the Greek people were never able to accomplish, of uniting civilization into one political whole. The world conquest that Greece made was intellectual. As a result, her contribution to civilization was artistic, literary, philosophical, and scientific, but not political. The Athenian Greeks were a highly artistic and imaginative rather than a practical people. They spent their energy on other matters than government and conquest. As a result the world will be forever indebted to them for an art and a literature of incomparable beauty and richness which still charms mankind; a philosophy which deeply influenced the early Christian religion, and has ever since tinged the thinking of the western world; and for many important beginnings in scientific knowledge which were lost for ages to a world that had no interest in or use for science. So deeply has our whole western civilization been tinctured by Greek thought that one enthusiastic writer has exclaimed, — "Except the blind forces of Nature, nothing moves in this world which is not Greek in its origin." [1] (R. 11.)

In education proper the old Athenian education offers us many lessons of importance that we of to-day may well heed. In the emphasis they placed on moral worth, education of the body as well as the mind, and moderation in all things, they were much ahead of us. Their schools became a type for the cities of the entire Mediterranean world, being found from the Black Sea south to the Persian Gulf and westward to Spain. When Rome became a world empire the Greek school system was adopted, and in modified form became dominant in Rome and throughout the provinces, while the universities of the Greek cities for long furnished the highest form of education for ambitious Roman youths. In this way Greek influence was spread throughout the Mediterranean world. The higher learning of the Greeks, preserved first at Athens and Alexandria, and later at Constantinople, was finally handed back to the western world at the time of the Italian Revival of Learning, after Europe had in part recovered from the effects of the barbarian deluge which followed the downfall of Rome.

[1] Henry Sumner Maine.

QUESTIONS FOR DISCUSSION

1. Try to picture what might have been the result for western civilization had the small and newly-developed democratic civilization of Greece been crushed by the Persians at the time they overran the Greek peninsula.
2. Do periods of great political, commercial, and intellectual expansion usually subject old systems of morality and education to severe strain? Illustrate.
3. Why was the change in the type of Athenian education during the Ephebic years a natural and even a necessary one for the new Athens?
4. Do you understand that the system of training before the Ephebic years was also seriously changed, or was the change largely a re-shaping and extension of the education of youths after sixteen?
5. Were the Sophists a good addition to the Athenian instructing force, or not? Why?
6. How may a State establish a corrective for such a flood of individualism as overwhelmed Greece, and still allow individual educational initiative and progress?
7. Do we as a nation face danger from the flood of individualism we have encouraged in the past? How is our problem like and unlike that of Athens after the Peloponnesian War?
8. What is the place in Greek life and thought of the ideal treatises on education written by Xenophon, Plato, and Aristotle, after the flood of individualism had set in?
9. In what ways was the conquest of Alexander good for world civilization?
10. Of what importance is it, in the history of our western civilization, that Greek thought had so thoroughly permeated the eastern Mediterranean world before Roman armies conquered the region?
11. Picture for yourself the great intellectual advances of the Greeks by contrasting the tribal preparedness-type of education of the early Greek States and the learning possessed by the scholars of the University at Alexandria.
12. Compare the spread of Greek language and knowledge throughout the eastern Mediterranean world, following the conquests of Alexander, with the spread of the English language and ideas as to government throughout the modern world.

SELECTED READINGS

In the accompanying *Book of Readings* the following selections are reproduced:

7. Wilkins: Athens in the Time of Pericles.
8. Isocrates: The Instruction of the Sophists.
9. Xenophon: An Example of Socratic Teaching.
10. Draper: The Schools of Alexandria.
11. Butcher: What we Owe to Greece.

QUESTIONS ON THE READINGS

1. Characterize the many educational influences of Athens, as pictured by Wilkins (7).
2. Were the evils of the Sophist teachers, which Isocrates points out (8), natural ones? Compare with teachers of vocal training to-day.

3. What would be necessary for the proper training of one for eloquence? Could any Sophist teacher have trained any one?
4. Would it be possible to-day for any one city to become such a center of the world's intellectual life as did Alexandria (10)? Why?
5. Could the Socratic method (9) be applied to instruction in psychology, ethics, history, and science equally well? Why? To what class of subjects is the Socratic quiz applicable?
6. How do you account for the fact that the wonderful promise of Alexandrian science was not fulfilled?
7. State our debt to the Greeks (11).

SUPPLEMENTAL REFERENCES

The most important references are indicated by an *

* Bevan, J. O. *University Life in Olden Time.*
* Butcher, S. H. *Some Aspects of the Greek Genius.*
* Davidson, Thos. *Aristotle, and Ancient Educational Ideals.*
* Freeman, K. J. *Schools of Hellas.*
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Laurie, S. S. *Historical Survey of Pre-Christian Education.*
* Mahaffy, J. P. *Old Greek Education.*
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Walden, John W. H. *The Universities of Ancient Greece.*
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CHAPTER III

THE EDUCATION AND WORK OF ROME

I. THE ROMANS AND THEIR MISSION

Development of the Roman State. About the time that the Hellenes, in the City-States of the Greek peninsula, had brought their civilization to its Golden Age, another branch of the great Aryan race, which had previously settled in the Italian peninsula, had begun the creation of a new civilization there which was destined to become extended and powerful. At the beginning of

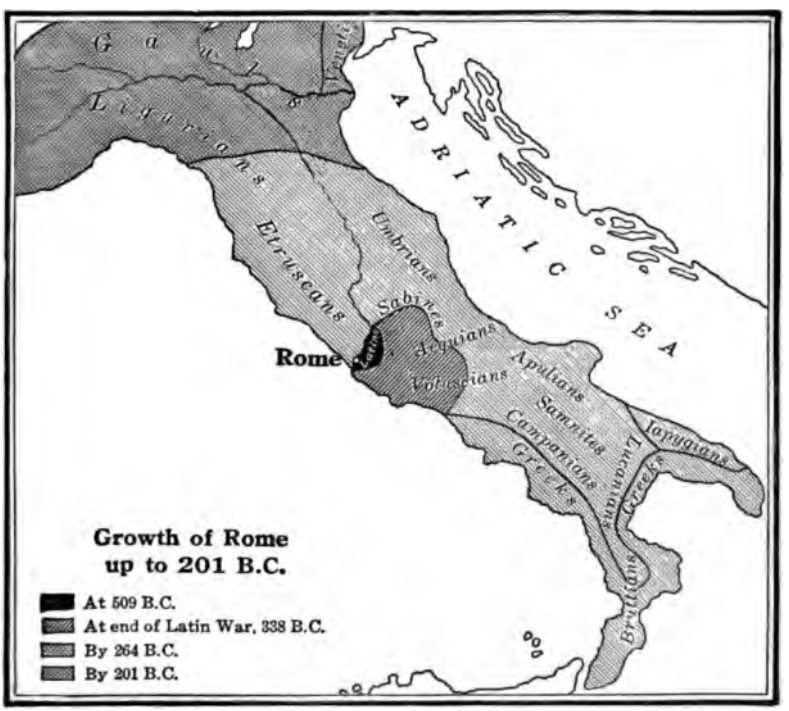


FIG. 16. THE EARLY PEOPLES OF ITALY, AND THE EXTENSION OF THE ROMAN POWER

In 509 B.C. Attica opened her citizenship to all free inhabitants, and half a century later the Golden Age of Greece was in full swing. By 338 B.C. Greece's glory had departed. Philip of Macedon had become master, and its political freedom was over. By 264 B.C. the center of Greek life and thought had been transferred to Alexandria, and Rome's great expansion had begun.

recorded history we find a number of tribes of this branch of the Aryan race settled in different parts of Italy, as is shown in Figure 16. Slowly, but gradually, the smallest of these divisions, the Latins, extended its rule over the other tribes, and finally over the Greek settlements to the south and the Gauls to the north, so that by 201 B.C. the entire Italian peninsula had become subject to the City-State government at Rome.

By a wise policy of tolerance, patience, conciliation, and assimilation the Latins gradually became the masters of all Italy. Unlike the Greek City-States, Rome seemed to possess a natural genius for the art of government. Upon the people she conquered she bestowed the great gift of Roman citizenship, and she attached them to her by granting local government to their towns and by interfering as little as possible with their local manners, speech, habits, and institutions. By founding colonies among them and by building excellent military roads to them, she insured her rule, and by kindly and generous treatment she bound the different Italian peoples ever closer and closer to the central government at Rome. By a most wonderful understanding of the psychology of other peoples, new in the world before the work of Rome, and not seen again until the work of the English in the nineteenth century, Rome gradually assimilated the peoples of the Italian peninsula and in time amalgamated them into a single Roman race. In speech, customs, manners, and finally in blood she Romanized the different tribes and brought them under her leadership. Later this same process was extended to Spain, Gaul, and even to far-off Britain.



FIG. 17
THE PRINCIPAL ROMAN ROADS

A concrete, practical people. The Roman people were a concrete, practical, constructive nation of farmers and herdsmen (R. 14), merchants and soldiers, governors and executives. The whole of the early struggle of the Latins to extend their rule and absorb the other tribes of the peninsula called for practical rulers — warriors who were at the same time constructive statesmen and executives who possessed power and insight, energy, and

personality. The long struggle for political and social rights,[1] carried on by the common people (*plebeians*) with the ruling class (*patricians*), tended early to shape their government along rough but practical lines,[2] and to elevate law and orderly procedure among the people. The later extension of the Empire to include many distant lands — how vast the Roman Empire finally became may be seen from the map on the following page — called still more for a combination of force, leadership, tolerance, patience, executive power, and insight into the psychology of subject people to hold such a vast empire together. Only a great, creative people, working along very practical lines, could have used and used so well the opportunity which came to Rome[3] to create a great world empire.

The great mission of Rome. Had Rome tried to impose her rule and her ways and her mode of thought on her subject people, and to reduce them to complete subjection to her, as the modern German and Austrian Empires, for example, tried to do with the peoples who came under their control, the Roman Empire could never have been created, and what would have saved civilization

[1] This struggle of the common people (*plebeians*) for an equal place with the ruling class (*patricians*) before the law, in religious matters, and in politics, covered two and a half centuries, the old restrictions being broken down but gradually. The most important steps in the process were:

509 B.C. Magistrates forbidden to scourge or execute a Roman citizen without giving him a chance to appeal to the people in their popular assembly. This "right of appeal" was regarded as the Magna Charta of Roman liberty.

494 B.C. Plebeian soldiers granted officers of their own (*Tribunes*) to protect them against patrician cruelty and injustice.

451–449 B.C. Laws must be written — Code commission appointed. Result, the *Laws of the Twelve Tables* (**R. 12**); these mark the beginning of the great Roman legal system.

445 B.C. Intermarriage between the two orders legalized.

367 B.C. Right to hold office granted, and one of the Consuls elected each year to be a plebeian.

250 B.C. By this date the distinctions between the two orders had disappeared; patricians and plebeians intermarried and formed one compact body of citizens in the Roman State.

[2] "The scholar who compares carefully the Greek constitutions with the Roman will undoubtedly consider the former to be finer and more finished specimens of political work. The imperfect and incomplete character which the Roman constitution presents, at almost any point of its history, the number of institutions it exhibits which appear to be temporary expedients merely, are necessary results of its method of growth to meet demands as they rose from time to time; they are evidence, indeed, of its highly practical character." (Adams, G. B., *Civilization during the Middle Ages*, 2d ed., p. 20.)

[3] The same opportunity came to Athens after the Persian Wars and to Sparta after the Peloponnesian War, but neither possessed the creative power along political and governmental lines, or the tolerance for the ideas and feelings of subject peoples, to accomplish anything permanent. Rome succeeded where previous States had failed because of her larger insight, tolerance, patience, and constructive power.

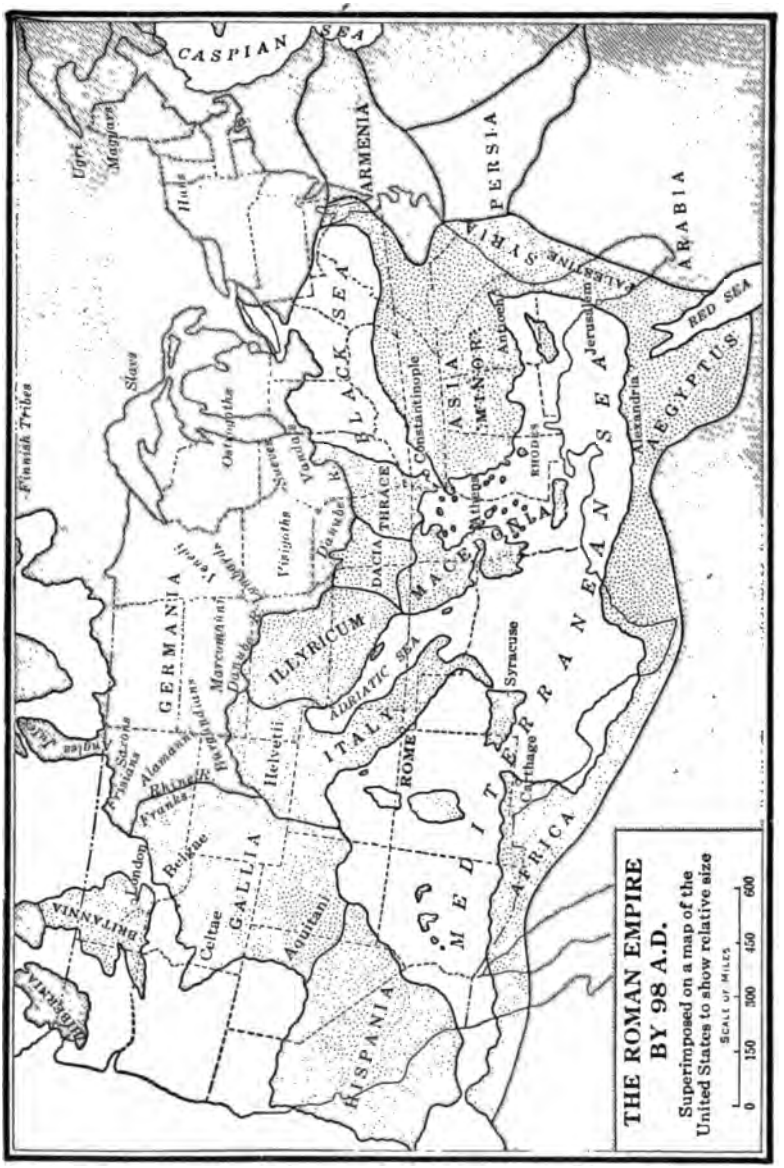


FIG. 18. THE GREAT EXTENT OF THE ROMAN EMPIRE

The map shows the Roman Empire as it was by the end of the first century A.D., and the tribes shown beyond the frontier are as they were at the beginning of the fourth century A.D. It was 2500 miles, air line, from the eastern end of the Black Sea to the western coasts of Spain, 1400 miles from Rome to Palestine, and 1100 miles from Rome to northern Britain. To maintain order in this vast area Rome depended on the loyalty of her subjects, the strength of her armies, her military roads, and a messenger service by horse, yet throughout this vast area she imposed her law and a unified government for centuries.

from complete destruction during the period of the barbarian invasions is hard to see. Instead, Rome treated her subjects as her friends, and not as conquered peoples; led them to see that their interests were identical with hers; gave them large local independence and freedom in government, under her strong control of general affairs; opened up her citizenship [1] and the line of promotion in the State to her provincials; [2] and won them to the peace and good order which she everywhere imposed by the advantages she offered through a common language, common law, common coinage, common commercial arrangements, common state service, and the common treatment of all citizens of every race.[3] In consequence, the provincial was willingly absorbed into the common Roman race [4] — absorbed in dress, manners, religion, political and legal institutions, family names, and, most important of all, in language. As a result, race pride and the native tongues very largely disappeared, and Latin became the spoken language of all except the lower classes throughout the whole of the Western Empire. Only in the eastern Mediterranean, where the Hellenic tongue and the Hellenic civilization still dominated, did the Latin language make but little headway, and here Rome had the good sense not to try to impose her speech or her culture. Instead she absorbed the culture of the East, while the East accepted in return the Roman government and Roman law, and Latin in time became the language of the courts and of government.

Having stated thus briefly the most prominent characteristics of the Roman people, and indicated their great work for civilization, let us turn back and trace the development of such educa-

[1] Cæsar extended Roman citizenship to certain communities in Gaul and in Sicily, and began the further extension of the process of assimilation by taking the conquered provincial into citizenship in the Empire. This was carried on and extended by succeeding Emperors until finally, in 212 A.D., Roman citizenship was extended to all free-born inhabitants in all the provinces.

[2] For example, Balbus, a Spaniard, was Consul in Rome forty years before the Christian era, and another Spaniard, Nerva, had become Emperor before the close of the first century A.D. Many commanders in the army and governors in the provinces were provincials by birth.

[3] Roman citizenship was much more than a mere name. A Roman citizen could not be maltreated or punished without a legal trial before a Roman court. If accused in a capital case he could always protect himself from what he considered an unjust decision by an "appeal to Cæsar"; that is, to the Emperor at Rome. The protection of law was always extended to his property and himself, wherever in the Roman Empire he might live or travel.

[4] Both literature and inscriptions testify abundantly to the affectionate regard in which Roman rule was held. The rule may have been far from perfect, judged from a modern point of view, but it was so much better and so much more orderly than anything that had gone before that it was accepted in all quarters.

tional system as existed among them, see in what it consisted, how it modified the life and habits of thinking of the Roman people, and what educational organization or traditions Rome passed on to western civilization.

II. THE PERIOD OF HOME EDUCATION

The early Romans and their training. In the early history of the Romans there were no schools, and it was not until about 300 B.C. that even primary schools began to develop. What education was needed was imparted in the home or in the field and in the camp, and was of a very simple type. Certain virtues were demanded — modesty, firmness, prudence, piety, courage, seriousness, and regard for duty — and these were instilled both by precept and example. Each home was a center of the religious life, and of civic virtue and authority. In it the father was a high priest, with power of life and death over wife and children. He alone conversed with the gods and prepared the sacrifices. The wife and mother, however, held a high place in the home and in the training of the children, the marriage tie being regarded as very sacred. She also occupied a respected position in society, and was complete mistress of the house (**R. 17**).

The religion of the city was an outgrowth of that of the home. Virtue, courage, duty, justice — these became the great civic virtues. Their religion, both family and state, lacked the beauty and stately ceremonial of the Greeks, lacked that lofty faith and aspiration after virtue that characterized the Hebrew and the later Christian faith, was singularly wanting in awe and mystery, and was formal and mechanical and practical [1] in character, but it exercised a great influence on these early peoples and on their conceptions of their duty to the State.

The father trained the son for the practical duties of a man

[1] Every house was protected from the evil spirits of the outside world by Janus, and had its sacred fire presided over by Vesta. Every house had its protecting Lares. The cupboard where the food was stored was blest by and under the charge of the Penates. The daily worship of these household deities took place at the family meal, the father offering a little food and a little wine at the sacred hearth. Every house father, too, had his guardian Genius, whose festival was celebrated on the master's birthday. In a similar fashion the State had its temples, its sacred fire and votive offerings, and various divinities ruled the elements and sent or withheld success.

Almost every activity in life was presided over by some deity, whom it was necessary to propitiate before engaging in it. Davidson says, with reference to the practical nature of their religion, that "While the Athenians rejoiced before their gods, the Romans kept a debtor and creditor account with theirs, and were very anxious that the balance should be on the right side."

and a citizen; the mother trained the daughter to become a good housekeeper, wife, and mother. Morality, character, obedience to parents and to the State, and whole-hearted service were emphasized. The boy's father taught him to read, write, and count. Stories of those who had done great deeds for the State were told, and martial songs were learned and sung. After 450 B.C. every boy had to learn the Laws of the Twelve Tables (**R. 12**), and be able to explain their meaning (**R. 13**). As the boy grew older he followed his father in the fields and in the public place and listened to the conversation of men.[1] If the son of a patrician he naturally learned much more from his father, by reason of his larger knowledge and larger contact with men of affairs and public business, than if he were the son of a plebeian. Through games as a boy, and later in the exercises of the fields and the camps, the boy gained what physical training he received.[2]



FIG. 19. A ROMAN FATHER INSTRUCTING HIS SON
(From a Roman Sarcophagus)

Education by doing. It was largely an education by doing, as was that of the old Greek period, though entirely different in character. Either by apprenticeship to the soldier, farmer, or statesman, or by participation in the activities of a citizen, was the training needed imparted. Its purpose was to produce good fathers, citizens, and soldiers.[3] Its ideals were found in the real and practical needs of a small State, where the ability to care for one's self was a neecssary virtue. To be healthy and strong, to

[1] "Among our ancestors," says Pliny, "one learned not only through the ears, but through the eyes. The young, in observing the elders, learned what they would soon have to do themselves, and what they would one day teach to their successor."

[2] Such careful physical training as was given in a Greek *palæstra* and *gymnasium* would have been regarded by the Romans as most effeminate. Unlike the Greeks, who strove for a harmonious bodily development, the Romans exercised for usefulness in war. Cicero exclaims, with reference to Greek gymnasial training: "What an absurd system of training youth is exhibited in their *gymnasia!* What a frivolous preparation for the labors and hazards of war!"

[3] Macaulay, in his *Horatius*, describes the results of the education of this early period as follows:

"Then none were for the party,
But all were for the State;
And the rich man loved the poor,
And the poor man loved the great.
Then lands were fairly portioned
And spoils were fairly sold;
For the Romans were like brothers
In the brave days of old."

reverence the gods and the institutions of the State, to obey his parents and the laws, to be proud of his family connections and his ancestors, to be brave and efficient in war, to know how to farm or to manage a business, were the aims and ends of this early training. It produced a nation of citizens who willingly subordinated themselves to the interests of the State,[1] a nation of warriors who brought all Italy under their rule, a calculating, practical people who believed themselves destined to become the conquerors and rulers of the world, and a reserved and proud race, trained to govern and to do business, but not possessed of lofty ideals or large enthusiasms in life (**Rs. 15, 16**).

III. THE TRANSITION TO SCHOOL EDUCATION

Beginnings of school education. Up to about 300 B.C. education had been entirely in the home, and in the activities of the fields and the State. It was a period of personal valor and stern civic virtue, in a rather primitive type of society, as yet but little in contact with the outside world, and little need of any other type of training had been felt. By the end of the third century B.C., the influence of contact with the Greek cities of southern Italy and Sicily (*Magna Græcia*), and the influence of the extensive conquests of Alexander the Great in the eastern Mediterranean (334–323 B.C.), had begun to be felt in Italy. By that time Greek had become the language of commerce and diplomacy throughout the Mediterranean, and Greek scholars and tradesmen had begun to frequent Rome. By 303 B.C. it seems certain that a few private teachers had set up primary schools at Rome to supplement the home training, and had begun the introduction of the pedagogue as a fashionable adjunct to attract attention to their schools. These schools, however, were only a fad at first, and were patronized only by a few of the wealthy citizens. Up to about 250 B.C., at least, Roman education remained substantially as it had been in the preceding centuries. Reading, writing, declamation, chanting, and the Laws of the Twelve Tables still constituted the subject-matter of instruction, and the old virtues continued to be emphasized.

By the middle of the third century B.C. Rome had expanded its

[1] "The Romans," says the historian, Wilhelm Ihne, "were distinguished from all other nations, not only by the extreme earnestness and precision with which they conceived their law and worked out the consequences of its fundamental principles, but by the good sense which made them submit to the law, once established, as an absolute necessity of political health and strength. It was this severity in thinking and acting which, more than any other cause, made Rome great and powerful."

rule to include nearly all the Italian peninsula (see Figure 16), and was transforming itself politically from a little rural City-State into an Empire, with large world relationships. A knowledge of Greek now came to be demanded both for diplomatic and for business reasons, and the need of a larger culture, to correspond with the increased importance of the State, began to be felt by the wealthier and better-educated classes. Greek scholars, brought in as captured slaves from the Greek colonies of southern Italy, soon began to be extensively employed as teachers and as secretaries.

About 233 B.C., Livius Andronicus, who had been brought to Rome as a slave when Tarentum, one of the Greek cities of southern Italy, was captured,[1] and who later had obtained his freedom, made a translation of the *Odyssey* into Latin, and became a teacher of Latin and Greek at Rome. This had a wonderful effect in developing schools and a literary atmosphere at Rome. The *Odyssey* at once became the great school textbook, in time supplanting the Twelve Tables, and literary and school education now rapidly developed. The Latin language became crystallized in form, and other Greek works were soon translated. The beginnings of a native Latin literature were now made. Greek higher schools were opened, many Greek teachers and slaves offered instruction, and the Hellenic scheme of culture, as it had previously developed in Attica, soon became the fashion at Rome.

Changes in national ideals. The second century B.C. was even more a period of rapid change in all phases and aspects of Roman life. During this century Rome became a world empire, annexing Spain, Carthage, Illyria, and Greece, and during the century that followed she subjugated northern Africa, Egypt, Asia Minor, and Gaul to the Elbe and the Danube (see Figure 18). Rome soon became mistress of the whole Mediterranean world. Her ships plied the seas, her armies and governors ruled the land. The introduction of wealth, luxuries, and slaves from the new provinces, which followed their capture, soon had a very demoralizing influence upon the people. Private and public religion and morality rapidly declined; religion came to be an empty ceremonial;

[1] The lot of a captive in war, everywhere throughout the ancient world, was to be taken and sold as a slave by his captors. Many educated Greeks were thus taken in the capture of Greek cities in southern Italy and sold as slaves in Rome. These were let out by their masters as teachers of the new learning. Even the thrifty Cato, who vigorously opposed the new learning on principle, was not averse to permitting his educated Greek slaves to conduct schools and thus add to his private fortune.

divorce became common; wealth and influence ruled the State; slaves became very cheap and abundant, and were used for almost every type of service. From a land of farmers of small farms, sturdy and self-supporting, who lived simply, reared large families, feared the gods, respected the State, and made an honest living, it became a land of great estates and wealthy men, and the self-respecting peasantry were transformed into soldiers for foreign wars, or joined the rabble in the streets of Rome.[1] Wealth became the great desideratum, and the great avenue to this was through the public service, either as army commanders and governors, or as public men who could sway the multitude and command votes and influence. Manifestly the old type of education was not intended to meet such needs, and now in Rome, as previously in Athens, a complete transformation in the system of training for the young took place. The imaginative and creative Athenians, when confronted by a great change in national ideals, evolved a new type of education adapted to the new needs of the time; the unimaginative and practical Romans merely adopted that which the Athenians had created.

The Hellenization of Rome. The result was the Hellenization of the intellectual life of Rome, making complete the Hellenization of the Mediterranean world. After the fall of Greece, in 146 B.C., a great influx of educated Greeks took place. As the Latin poet Horace expressed it:

> Captive Greece took captive her rude conqueror,
> And brought the arts to Latium.

So completely did the Greek educational system seem to meet the needs of the changed Roman State that at first the Greek schools were adopted bodily — Greek language, pedagogue, higher schools of rhetoric and philosophy, and all — and the schools were in reality Greek schools but slightly modified to meet the needs of Rome. *Gymnasia* were erected, and wealthy Romans, as well as youths, began to spend their leisure in studying Greek and in trying to learn gymnastic exercises.

In time the national pride and practical sense of the Romans

[1] These men had little choice otherwise. Grain from Spain and Africa became so cheap that a farmer could not raise enough on his small farm to pay his taxes and support his family, so he was obliged to sell his land to men who turned it into large cattle and sheep ranches. He would not emigrate to the provinces, as Englishmen have done to Canada and Australia, but instead went to the cities, where he led a hand-to-mouth existence in a type of tenement house. It was from such sources that the Roman mob, demanding free grain and entertainment in return for its votes, was made up.

led them to open so-called "culture schools" of their own, modeled after the Greek. The Latin language then replaced the Greek as the vehicle of instruction, though Greek was still studied extensively, and Rome began the development of a system of private-school instruction possessing some elements that were native to Roman life and Roman needs.

Struggle against, and final victory. That this great change in national ideals and in educational practice was accepted without protest should not be imagined. Plutarch and other writers appealed to the family as the center for all true education. Cato the elder, who died in 149 B.C., labored hard to stem the Hellenic tide. He wrote the first Roman book on education, in part to show what education a good citizen needed as an orator, husbandman, jurist, and warrior, and in part as a protest against Hellenic innovations. In 167 B.C., the first library was founded in Rome, with books brought from Greece by the conqueror Paulus Emilius. In 161 B.C., the Roman Senate directed the Prætor to see "that no philosophers or rhetoricians be suffered in Rome" (**R. 20 a**), but the edict could not be enforced. In 92 B.C., the Censors issued an edict expressing their disapproval of such schools (**R. 20 b**). By 100 B.C., the Hellenic victory was complete, and the Græco-Roman school system had taken form. In 27 B.C., Rome ceased to be a Republic and became an Empire, and under the Emperors the professors of the new learning were encouraged and protected, higher schools were established in the provinces, literature and philosophy were opened as possible careers, and the Greek language, literature, and learning were spread, under Roman imperial protection, to every corner of the then civilized world. This victory of Hellenic thought and learning at Rome, viewed in the light of the future history of the civilization of the world, was an event of large importance.



FIG. 20. CATO THE ELDER (234–148 B.C.)

IV. THE SCHOOL SYSTEM AS FINALLY ESTABLISHED

The ludus, or primary school. The elementary school, known as the *ludus*, or *ludus literarum*, the teacher of which was known

as a *ludi magister*, was the beginning or primary school of the scheme as finally evolved. This corresponded to the school of the Athenian *grammatist*, and like it the instruction consisted of reading, writing, and counting. These schools were open to both sexes, but were chiefly frequented by boys. They were entered at the age of seven, sometimes six, and covered the period up to twelve. Reading and writing were taught by much the same methods as in the Greek schools, and approximately the same writing materials were used. Something of the same difficulty was experienced also in mastering the reading art (R. 21). Dionysius of Halicarnassus, a Greek historian who lived in Rome for twenty-two years, during the first century B.C., has left us a clear description of the Roman method of teaching reading:

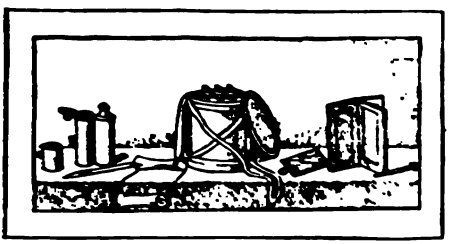


FIG. 21. ROMAN WRITING-MATERIALS
Inkstand, pen, letter, box of manuscripts, wax tablets, stylus.

> When we learned to read was it not necessary at first to know the name of the letters, their shape, their value in syllables, their differences, then the words and their case, their quantity long or short, their accent, and the rest?
>
> Arrived at this point we began to read and write, slowly at first and syllable by syllable. Some time afterwards, the forms being sufficiently engraved on our memory, we read more cursorily, in the elementary book, then in all sorts of books, finally with incredible quickness and without making any mistake.

Writing seems rather to have followed reading, and, as in the Greek schools, the pupils copied down from dictation and made their own books (*dictata*). Literature received no such emphasis in the elementary schools of Rome as in those of the Greeks, and the *palæstra* of the Greeks was not reproduced at Rome.

Due in part to the practical character of the Roman people, to the established habit of keeping careful household accounts, to the difficulties of their system of calculation,[1] to the practice

[1] Arithmetic was not easy for the Romans, partly because they had no figure or other sign for zero, partly because they used a decimal system for counting and a duodecimal for their money, and partly because the Roman system of notation

of finger reckoning, and to the vast commercial and financial interests that the Romans formed throughout the world which they conquered, arithmetic became a subject of fundamental importance in their schools, and much time was given to securing perfection in calculation and finger reckoning.[1] Hence it occupied a place of large importance in the primary school. An abacus or counting-board was used, similar to the one shown in Figure 22, and Horace mentions a bag of stones (*calculi*) as a part of a schoolboy's equipment.

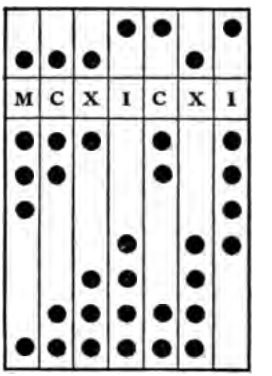


FIG. 22. A ROMAN COUNTING-BOARD

Pebbles were used, those nearest the numbered dividing partition being counted. Each pebble above when moved downward counted five of those in the same division below. The board now shows 8,760,254.

The *ludi magister*. The *ludi magister* at Rome held a position even less enviable than that held by the *grammatist* at Athens. "The starveling Greek," who was glad to barter his knowledge for the certainty of a good dinner, was sneered at by many Roman writers. Many slaves were engaged in this type of instruction, bringing in fees for their owners. It was not regarded as of importance that the teachers of these schools be of high grade. The establishment of and attendance at these primary schools was wholly voluntary, and the children in them probably represented but a small percentage of those of school age in the total population. These schools became quite common in the Italian cities, and in time were found in the provincial cities of the Empire as well. They remained, however, entirely private-adven-

(I, V, X, L, C. D, M) did not adapt itself to quick calculation. Try, for example, these simple sums:

Add: CCLVII + CIX

Subtract: LXVIII − XXXIV

Multiply: CXXV × XII

Divide: XII | CXXXII

[1] Finger reckoning (whence *digits*) with the Romans attained a prominence probably never reached with any other people. Bills and accounts were reckoned up on the fingers, in the presence of the patron. Eighteen positions of the fingers of the left hand stood for the nine units and the nine tens, and eighteen positions of the fingers of the right hand stood for the nine hundreds and the nine thousands. For larger sums, such as ten thousand and more, various parts of the body were touched. Any one who betrayed, according to Quintilian, "by an uncertain or awkward movement of his fingers, a want of confidence in his calculations," was thought to be but imperfectly trained in arithmetic.

ture undertakings, the State doing nothing toward encouraging their establishment, supervising the instruction in them, or requiring attendance at them. They were in no sense free schools, nor were the prices for instruction fixed, as in our private schools of to-day. Instead, the pupil made a present to the master, usually at some understood rate, though some masters left the size of the fee to the liberality of their pupils.[1] The pedagogue, copied from Greece, was nearly always an old or infirm slave of the family.

The schools were held anywhere — in a portico (see Figure 23), in a shed or booth in front of a house, in a store, or in a recessed



FIG. 23. A ROMAN PRIMARY SCHOOL (*Ludus*)
(From a fresco found at Herculaneum)
This shows a school held in a portico of a house.

corner shut in by curtains. A chair for the master, benches for the pupils, an outer room for cloaks and for the pedagogues to wait in, and a bundle of rods (*ferula*) constituted the necessary equipment. The pupils brought with them boxes containing

[1] There was much complaint that parents were slow with their fees, and at times forgot them entirely if the boy did not turn out well. Finally, in the reign of Diocletian (284–305 A.D.), in an effort to relieve the distress of schoolmasters, prices were legally fixed at approximately the equivalent of $1.20 per month per pupil for teaching reading and $1.80 for arithmetic, measured in money values of a decade ago. These were regarded as "hard times prices."

writing-materials, book-rolls, and reckoning-stones. Schools began early in the morning, pupils in winter going with lanterns to their tasks. There was much flogging of children, and in Martial we find an angry epigram which he addressed to a schoolmaster who disturbed his sleep (**R. 23 a**).

The secondary schools. Secondary or Latin grammar schools, under a *grammaticus*, and covering instruction from the age of twelve to sixteen, had become clearly differentiated from the primary schools under a *ludi magister* by the time of the death of Cato, 148 B.C. At first this higher instruction began in the form of private tutors, probably in the homes of the wealthy, and Greek was the language taught. By the beginning of the first century B.C., however, Latin secondary schools began to arise, and in time these too spread to all the important cities of the Empire. Attendance at them was wholly voluntary, and was confined entirely to the children of the well-to-do classes. The teachers were Greeks, or Latins who had been trained by the Greeks. Each teacher taught as he wished, but the schools throughout the Empire came to be much the same in character. The course of study consisted chiefly of instruction in grammar and literature, the purpose being to secure such a mastery of the Latin language and Greek and Latin literatures as might be most helpful in giving that broader culture now recognized as the mark of an educated man, and in preparing the young Roman to take up the life of an orator and public official (**R. 24**). Both Greek and Latin secondary schools were in existence, and Quintilian, the foremost Roman writer on educational practice, recommends attendance at the Greek school first.

Grammar was studied first, and was intended to develop correctness in the use of speech. With its careful study of words, phonetic changes, drill on inflections, and practice in composing and paragraphing, this made a strong appeal to the practical Roman and became a favorite study. Literature followed, and was intended to develop an appreciation for literary style, elevate thought, expand one's knowledge, and, by memorization and repetition, to train the powers of expression. The method practiced was much as follows: The selection was carefully read first by the teacher, and then by the pupils.[1] After the reading the

[1] "Reading aloud, with careful attention to pronunciation, accent, quantity, and expression, formed an important part of the training in literature of a Latin youth. Correct reading of Latin was a much more difficult art, as practiced, than

selection was gone over again and the historical, geographical, and mythological allusions were carefully explained by the teacher.[1] The text was next critically examined, to point out where and how it might be improved and its expressions strengthened, and much paraphrasing of it was engaged in. Finally the study of the selection was rounded out by *a judgment* — that is, a critical estimate of the work, a characterization of the author's style, and a résumé of his chief merits and defects. The foundations were here laid for Grammar and Rhetoric as the great studies of the Middle Ages.

Homer and Menander were the favorite authors in Greek, and Vergil, Horace, Sallust, and Livy in Latin, with much use of Æsop's *Fables* for work in composition. The pupils made their own books from dictation, though in later years educated slave labor became so cheap that the copying and sale of books was organized into a business at Rome, and it was possible for the children of wealthy parents to own their own books. Grammar, composition, elocution, ethics, history, mythology, and geography were all comprehended in the instruction in grammar and literature in the secondary schools. A little music was added at times, to help the pupil intone his reading and declamation. A little geometry and astronomy were also included, for their practical applications. The athletic exercises of the Greeks were rejected, as contributing to immorality and being a waste of time and strength. In a sense these schools were finishing schools for Roman youths who went to any school at all, much as are our high schools of to-day for the great bulk of American children. The schools were better housed than those of the *ludi*, and the masters were of a better quality and received larger fees. Like the elementary schools, the State exercised no supervision or control over these schools or the teachers or pupils in them.

is the reading of English, as all of us well know who learned properly to intone our

"Arma virumque cano, Trojæ qui primus ab oris
Italiam, fato profugus, Lavinaque venit."

The lack of use of small letters and spacing between the words (R. 21), as well as poor punctuation, also added to the difficulty.

[1] A nonsensical minuteness was followed here, and many trivialities were emphasized. Juvenal tells us, in his Seventh Satire, written about 130 A.D., that "a teacher was expected to read all histories and know all authors as well as his finger ends. That, if questioned, he should be able to tell the name of Anchises' nurse, and the name and native land of the stepmother of Anchemotus — tell how many years Acestes lived — how many flagons of wine the Sicilian king gave to the Phrygians." This reminds us of some of the dissected study of English and Latin until recently given in our colleges and high schools.

The schools of rhetoric. Up to this point the schools established had been for practical and useful information (the primary schools) or cultural (the grammar or secondary schools). On top of these a higher and professional type of school was next developed, to train youths in rhetoric and oratory, preparatory to the great professions of law and public life at Rome.[1] These schools were direct descendants of the Greek rhetorical schools, which evolved from the schools of the Sophists. Suetonius[2] tells us that:

> Rhetoric, also, as well as grammar, was not introduced amongst us till a late period, and with still more difficulty, inasmuch as we find that, at times, the practice of it was even prohibited.[3] . . . However, by slow degrees, rhetoric manifested itself to be a useful and honorable study, and many persons devoted themselves to it both as a means of defense and of acquiring a reputation. In consequence, public favor was so much attracted to the study of rhetoric that a vast number of professional and learned men devoted themselves to it; and it flourished to such a degree that some of them raised themselves by it to the rank of senators and to the highest offices.

These schools, the teachers of which were known as *rhetors*, furnished a type of education representing a sort of collegiate education for the period. They were oratorical in purpose, because the orator had become the Roman ideal of a well-educated man (**R. 24**). During the life of the Republic the orator found many opportunities for the constructive use of his ability, and all young men ambitious to enter law or politics found the training of these schools a necessary prerequisite. They were attended for two or three years by boys over sixteen, but only the wealthier and more aristocratic families could afford to send their boys to them.

In addition to oratorical and some legal training, these schools included a further linguistic and literary training, some mathe-

[1] Quintilian well states the aim of this higher education when he says that "the man who can duly sustain his character as a citizen, who is qualified for the management of public and private affairs, and who can govern communities by his counsels, settle them by means of laws, and improve them by judicial enactments, can certainly be nothing else but an orator."

[2] In his *Lives of Eminent Grammarians and Rhetoricians*, chap. I. Suetonius lived from 75 to 160 A.D., and was an advocate at Rome and private secretary to the Emperor Hadrian.

[3] There was a general dread of Greek higher learning on the part of the older Romans, and this found expression in many ways. Among these was an edict of the Senate, in 161 B.C., directing the Prætor to see that "no philosophers or rhetoricians be suffered at Rome" (**R. 20**), a decree which could not be enforced, and the edict of the Censors, in 92 B.C. (**R. 20**), expressing their disapproval of the Latin schools of rhetoric.

matical and scientific knowledge, and even some philosophy. The famous "Seven Liberal Arts" of the Middle Ages — Grammar, Rhetoric, and Dialectic; Music, Arithmetic, Geometry, and Astronomy — all seem to have been included in the instruction of these schools.[1] The great studies, though, were the first three



FIG. 24. A ROMAN SCHOOL OF RHETORIC

This picture, which has been drawn from a description, shows a much better type of school than that of the *ludi*.

and some Law, Music being studied largely to help with gestures and to train the voice, Geometry to aid in settling lawsuits relating to land, Dialectic (logic) to aid in detecting fallacies, and Astronomy to understand the movements of the heavenly bodies and the references of literary writers.[2] There was much work in debate and in the declamation of ethical and political material, the fine distinctions in Roman Law and Ethics were brought out,[3] and there was much drill in preparing and delivering speeches and much attention given to the factors involved in the preparation and delivery of a successful oration (**R. 25**).

[1] These seven studies became the famous studies of the church schools of the Middle Ages, with Grammar as the greatest and most important study (see chap. VII; **R. 74**). The curriculum of the Middle Ages was a direct inheritance from Rome.

[2] See Quintilian, *Institutes of Oratory*, book I, chap. X, 22, 37, and 46. This chapter is devoted largely to a description of the use of these studies.

[3] Sample questions which were debated to bring out the fine distinctions in Roman Law and Ethics were:

(*a*) Was a slave about whose neck a master had hung the leather or golden token (worn by free youths only), in order to smuggle him past the boundary, freed when he reached Roman soil wearing this insignia of freedom?

(*b*) If a stranger buys a prospective draught of fishes and the fisherman draws up a casket of jewels, does the stranger own the jewels?

These schools became very popular as institutions of higher learning, and continued so even after the later Emperors, by seizing the power of the State, had taken away the inspiration that comes from a love of freedom and had thus deprived the rhetorical art of practical value. The work of the schools then became highly stilted and artificial in character, and oratory then came to be cultivated largely as a fine art.[1] Men educated in these schools came to boast that they could speak with equal effectiveness on either side of any question, and the art came to depend on the use of many and big words and on the manners of the stage. Such ideals naturally destroyed the value of these schools, and stopped intellectual progress so far as they contributed to it.

Much was done by the later Emperors to encourage these schools, and they too came to exist in almost every provincial city in the Empire. Often they were supported by the cities in which they were located. The Emperor Vespasian, about 75 A.D. began the practice of paying, from the Imperial Treasury, the salaries of grammarians and rhetoricians[2] at Rome. Antoninus Pius, who ruled as Emperor from 138 to 161 A.D., extended payment to the provinces, gave to these teachers the privileges of the senatorial class, and a certain number in each city were exempted from payment of taxes, support of soldiers, and obligations to military service. Other Emperors extended these special privileges (**R. 26**) which became the basis for the special rights afterwards granted to the Christian clergy (**R. 38**) and, still later, to teachers in the universities (**Rs. 101–04**).

University learning. Roman youths desiring still further training could now journey to the eastward and attend the Greek universities (see Figure 14). A few did so, much as American students in the middle of the nineteenth century went to Germany for higher study. Athens and Rhodes were most favored. Brutus, Horace, and Cicero, among others, studied at Athens; Cæsar,

[1] In the later centuries of the Empire, people went to hear a man who could orate or declaim, as people now do to hear a great political orator, a revivalist preacher, or a popular actor or singer. A form of amusement for distinguished travelers passing through a city was to have some one orate before them. "This power of using words for mere pleasurable effect," says Professor Dill, in his *Roman Society in the Last Century of the Western Empire*, "on the most trivial or the most extravagantly absurd themes, was for many ages, in both West and East, esteemed the highest proof of talent and cultivation."

[2] Each Greek rhetorician in Rome was given one hundred *sestertia* (about $4000) yearly from the Imperial Treasury, Quintilian probably being one of the first to receive a state salary.

Cicero, and Cassius at Rhodes. Later Alexandria was in favor. In a library founded in the Temple of Peace by Vespasian (ruled 69 to 79 A.D.) the University at Rome had its origin, and in time this developed into an institution with professors in law, medicine, architecture, mathematics and mechanics, and grammar and rhetoric in both the Latin and Greek languages. In this many youths from provincial cities came to study. The lines of instruction represented nothing, however, in the way of scientific investigation or creative thought; the instruction was formal and dogmatic, being largely a further elaboration of what had previously been well done by the Greeks.

Nature of the educational system developed. Such was the educational system which was finally evolved to meet the new cultural needs of the Roman Empire. In all its foundation elements it was Greek. Having borrowed — conquered one might almost say — Greek religion, philosophy, literature, and learning, the Romans naturally borrowed also the school system that had been evolved to impart this culture. Never before or since has any people adapted so completely to their own needs the system of educational training evolved by another. To the Greek basis some distinctively Roman elements were added to adapt it better to the peculiar needs of their own people, while on the other hand many of the finer Greek characteristics were omitted entirely. Having once adopted the Greek plan, the constructive Roman mind organized it into a system superior to the original, but in so doing formalized it more than the Greeks had ever done (R. 19).

18 or 19 to 21 & 22	University	(Greek Universities) University of Rome (Professor)	Law Medicine Architecture Mathematics Grammar Rhetoric
16 to 18 or 19	Collegiate	Schools of Rhetoric (Rhetor)	Grammar Rhetoric Dialectic Law
12 to 16	Secondary	Latin Grammar Schools (Grammaticus)	Grammar and Literature
6 or 7 to 12	Elementary	Ludi, or Primary Schools (Ludi magister)	Reading Writing Reckoning

FIG. 25. THE ROMAN VOLUNTARY EDUCATIONAL SYSTEM, AS FINALLY EVOLVED

That the system afforded an opportunity to wealthy Romans to obtain for their children some understanding and appreciation of the culture of the Greek world with which their Empire was

now in contact, and answered fairly well the preparatory needs along political and governmental lines of those Romans who could afford to educate their boys for such careers, can hardly be doubted (**R. 22**). Roman writers on education, especially Cicero (**R. 24**) and Quintilian (**R. 25**), give us abundant testimony as to the value and usefulness of the system evolved in the training of orators and men for the public service. In the provinces, too, we know that the schools were very useful in inculcating Roman traditions and in helping the Romans to assimilate the sons of local princes and leaders.[1] During the days of the Republic the schools were naturally more useful than after the establishment of the Empire, and especially after the later Emperors had stamped out many of the political and civic liberties for the enjoyment of which the schools prepared. On the other hand, the schools reached but a small, selected class of youths, trained for only the political career, and cannot be considered as ever having been general or as having educated any more than a small percentage of the future citizens of the State. Many of the important lines of activity in which the Romans engaged, and which to-day are regarded as monuments to their constructive skill and practical genius, such as architectural achievements, the building of roads and aqueducts, the many skilled trades, and the large commercial undertakings, these schools did nothing to prepare youths for. The State, unlike Athens, never required education of any one, did not make what was offered a preparation for citizenship, and made no attempt to regulate either teachers or instruction until late in the history of the Empire. Education at Rome was from the first purely a private-adventure affair, most nearly analogous with us to instruction in music and dancing. Those who found the education offered of any value could take it and pay for it; those who did not could let it alone. A few did the former, the great mass of the Romans the latter. For the great slave class that developed at Rome there was, of course, no education at all.

Results on Roman life and government. Still, out of this private and tuition system of schools many capable political leaders and executives came — men who exercised great influence on the

[1] "He [Claudius] was also attentive to provide a liberal education for the sons of their chieftains; . . . and his attempts were attended with such success that they, who lately disdained to make use of the Roman language, were now ambitious of becoming eloquent. Hence the Roman habit began to be held in honor, and the toga was frequently worn." Tacitus's Account of Britain, *Agricola*, chap. 21.

history of the State, fought out her political battles, organized and directed her government at home and in the provinces, and helped build up that great scheme of government and law and order which was Rome's most significant contribution to future civilization.[1] It was in this direction, and in practical and constructive work along engineering and architectural lines, that Rome excelled. The Roman genius for government and law and order and constructive undertakings must be classed, in importance for the future of civilization in the world, along with the ability of Greece in literature and philosophy and art. "If," says Professor Adams, "as is sometimes said, that in the course of history there is no literature which rivals the Greek except the English, it is perhaps even more true that the Anglo-Saxon is the only race which can be placed beside the Romans in creative power and in politics." The conquest of the known world by this practical and constructive people could not have otherwise than decisively influenced the whole course of human history, and, coming at the time in world affairs that it did, the influence on all future civilization of the work of Rome has been profound. The great political fact which dominated all the Middle Ages, and shaped the religion and government and civilization of the time, was the fact that the Roman Empire had been and had done its work so well.

V. ROME'S CONTRIBUTION TO CIVILIZATION

Greece and Rome contrasted. The contrast between the Greeks and the Romans is marked in almost every particular. The Greeks were an imaginative, subjective, artistic, and idealistic people, with little administrative ability and few practical tendencies. The Romans, on the other hand, were an unimaginative, concrete, practical, and constructive nation. Greece made its great contribution to world civilization in literature and philosophy and art; Rome in law and order and government. The Greeks lived a life of æsthetic enjoyment of the beautiful in nature and art, and their basis for estimating the worth of a thing was intellectual and artistic; to the Romans the æsthetic and the

[1] England offers us the nearest modern analogy. This was one of the last of the great European nations to establish popular education, but for centuries previous thereto the great private, tuition, grammar schools of England — Eton, Harrow, Rugby, Winchester, and others — together with the Universities of Oxford and Cambridge, prepared a succession of leaders for the State — men who have steered England's destinies at home and abroad and made her a great world power.

beautiful made little appeal, and their basis for estimating the worth of a thing was utilitarian. The Greeks worshiped "the beautiful and the good," and tried to enjoy life rationally and nobly, while the Romans worshiped force and effectiveness, and lived by rule and authority. The Greeks thought in personal terms of government and virtue and happiness, while the Romans thought in general terms of law and duty, and their happiness was rather in present denial for future gain than in any immediate enjoyment.

As a result the Romans developed no great scholarly or literary atmosphere, as the Greeks had done at Athens. They built up no great speculative philosophies, and framed no great theories of government. Even their literature was, in part, an imitation of the Greek, though possessing many elements of native strength and beauty. They were a people who knew how to accomplish results rather than to speculate about means and ends. Usefulness and effectiveness were with them the criteria of the worth of any idea or project. They subdued and annexed an empire, they gave law and order to a primitive world, they civilized and Romanized barbarian tribes, they built roads connecting all parts of their Empire that were the best the world had ever known, their aqueducts and bridges were wonders of engineering skill, their public buildings and monuments still excite admiration and envy, in many of the skilled trades they developed tools and processes of large future usefulness, and their agriculture was the best the world had known up to that time. They were strong where the Greeks were weak, and weak where the Greeks were strong.

By reason of this difference the two peoples supplemented one another well in the work of laying the foundations upon which our modern civilization has been built. Greece created the intellectual and æsthetic ideals and the culture for our life, while Rome developed the political institutions under which ideals may be realized and culture may be enjoyed. From the Greeks and Hebrews our modern life has drawn its great inspirations and its ideals for life, while from the Romans we have derived our ideals as to government and obedience to law. One may say that the Romans as a people specialized in government, law, order, and constructive practical undertakings, and bequeathed to posterity a wonderful inheritance in governmental forms, legal codes, commercial processes, and engineering undertakings, while the Greeks left to us a philosophy, literature, art, and a world culture which

the civilized world will never cease to enjoy. The Greeks were an imaginative, impulsive, and a joyous people; the Romans sedate, severe, and superior to the Greeks in persistence and moral force. The Greeks were ever young; the Romans were always grown and serious men.

Rome's great contribution. Rome's great contribution, then, was along the lines just indicated. To this, the school system which became established in the Roman State contributed only indirectly and but little. The unification of the ancient world into one Empire, with a common body of traditions, practices, coinage, speech, and law, which made the triumph of Christianity possible; the formulation of a body of law [1] which barbarian tribes accepted, which was studied throughout the Middle Ages, which formed the basis of the legal system of the mediæval Church, and which has largely influenced modern practice; the development of a language from which many modern tongues have been derived, and which has modified all western languages; and the perfection of an alphabet which has become the common property of all nations whose civilization has been derived from the Greek and Roman — these constitute the chief contributions of Rome to modern civilization.

Roman city government, too, had been established throughout all the provincial cities, and this remained after the Empire had passed away. The municipal corporation, with its charter of rights, has ever since been a fixed idea in the western world. Roman law, organized into a compact code, and studied in the law schools of the Middle Ages, has modified our modern ideas and practices to a degree we scarcely realize. It was accepted by the German rulers as a permanent thing after they had overrun the Empire, and it remained as the law of the courts wherever Roman subjects were tried. Preserved and codified at Constantinople under Justinian in the sixth century, and re-introduced into western Europe when the study of law was revived in the newly founded universities in the twelfth and thirteenth centuries,

[1] This grew up, as all law grows, by enacted laws and decisions of the courts, and in time came to be an enormous body of law. Lacking the printed law books and indices of to-day, to obtain a knowledge of Roman law became a formidable task. Finally the practical Roman mind codified it, and reduced it to system and order. The Theodosian Code, of 438 A.D., and the Justinian Code, of 528 and 534 A.D., were the final results. These codes were compact, capable of duplication with relative ease, and later became the standard textbooks throughout the Middle Ages. The great importance of these codifications may be appreciated when we know that almost all the original laws and decisions from which they were compiled have been lost.

Roman law has greatly modified all modern legal practices and has become the basis of the legal systems of a number of modern states.[1]

Of all the Roman contributions to modern civilization perhaps the one that most completely permeates all our modern life is their alphabet and speech. Figure 26 shows how our modern alphabet goes back to the old Roman, which they obtained from the Greek colonies in southern Italy, and which the Greeks obtained from the still earlier Phœnicians. This alphabet has become the common property of almost all the civilized world.[2] In speech, the French, Spanish, Portuguese, and Italian tongues go back directly to the Latin, and these are the tongues of Mexico and South America as well. The English language, which is spoken throughout a large part of the civilized world, and by two thirds of its inhabitants, has also received so many additions from Romanic sources that we to-day scarcely utter a sentence without using some word once used by the citizens of ancient Rome.

Among the smaller but nevertheless important contributions which we owe to Rome, and which were passed on to mediæval and modern Europe, should be men-



FIG. 26. ORIGIN OF OUR ALPHABET

The German type, like the so-called Old English (see Fig. 45), illustrates the corruption of letter forms through the copying of manuscripts during the Middle Ages.

[1] The Romanic countries — France, Spain, Italy — have drawn their law most completely from the Justinian Code. Due to Spanish and French occupation of parts of America, Roman legal ideas also entered here, the Louisiana Code of 1824 being Roman in law and technical expressions and spirit, though English in language. Spanish and Portuguese settlement of the South American continent has carried Roman law there.

[2] The Roman alphabet is the alphabet of all North and South America, Australia, Africa, and all of Europe except Russia, Greece, Germany, Austria-Hungary, and a few minor Slavic and Teutonic peoples. Even in Germany and Austria, Roman letters were rapidly superseding the more difficult German letters in the printing of papers and books for the better-educated classes before the Great War. In India, Siam, China, and Japan, Roman letters are also being increasingly used.

tioned certain practical knowledge in agriculture and the mechanic arts; many inventions and acquired skills in the arts and trades; an organized sea and land trade and commerce; cleared and improved lands, good houses, roads and bridges; great architectural and engineering remains, scattered all through the provinces; the beginnings of the transformation of the slave into the serf, from which the great body of freemen of modern Europe later were evolved; and certain educational conceptions and practices which later profoundly influenced educational methods and procedure.

How large these contributions were we shall appreciate better as we proceed with our history. Of the negative contributions, the most dangerous has been the idea of the rule of one imperial government, which has inspired the autocratic governments of modern Europe to try to imitate the world-wide rule of Imperial Rome.

The way paved for Christianity. It was the great civilizing and unifying work of the Roman State that paved the way for the next great contribution to the foundations of the structure of our modern civilization — the contribution of Christianity. Had Italy never been consolidated; had the barbarian tribes to the north never been conquered and Romanized; had Spain and Africa and the eastern Mediterranean never known the rule of Rome; had the Latin language never become the speech of the then civilized peoples; had Roman armies never imposed law and order throughout an unruly world; had Roman governors and courts never established common rights and security; had Roman municipal government never come to be the common type in the cities of the provinces; had Roman schools in the provincial cities never trained the foreign citizen in Roman ways and to think Roman thoughts; had Rome never established free trade and intercourse throughout her Empire; had Rome never developed processes and skills in agriculture and the creative arts; had there been no Roman roads and common coinage; and had Rome not done dozens of other important things to unify and civilize Europe and reduce it to law and order, it is hard to imagine the chaos that would have resulted when the Empire gave way to the barbarian hordes which finally overwhelmed it. Where we should have been to-day in the upward march of civilization, without the work of Rome, it is impossible to say.

QUESTIONS FOR DISCUSSION

1. Contrast the Romans as a colonizing power with the modern Germans. The English. The French.
2. At what period in our national development did home education with us occupy substantially the same place as it did in Rome before 300 B.C.? In what respects was the education given boys and girls similar? Different?
3. What was the most marked advance over the Greeks in the early Roman training?
4. Contrast the education of the Athenian, Spartan, and Roman boy, during the early period in each State.
5. To what extent does early Roman education indicate the importance of the parent and of study of biography in the education of the young?
6. Was the change in character of the education of Roman youths, after the expansion of the Roman State and the establishment of world contacts, preventable, or was it a necessary evolution? Why? Have we ever experienced similar changes?
7. As a State increases in importance and enlarges its world contacts, is a correspondingly longer training and enlarged culture necessary at home?
8. What idea do you get as to the extent to which the Latinized *Odyssey* was read from the fact that the Latin language was crystallized in form shortly after the translation was made?
9. What does the rapid adoption of the Greek educational system, and the later evolution of a native educational system out of it, indicate as to the nature of Roman expansion?
10. Was the introduction of the Greek *pedagogue* as a fashionable adjunct natural? Why?
11. Why is a period of very rapid expansion in a State likely to be demoralizing? How may the demoralization incident to such expansion be anticipated and minimized?
12. Why does the coming of large landed estates introduce important social problems? Have we the beginnings of a social problem of this type? What correctives have we that Rome did not have?
13. State the economic changes which hastened the introduction of a new type of higher training at Rome.
14. Was the Hellenization of Rome which ensued a good thing? Why?
15. How do you account for Rome not developing a state school system in the period of great national need and change, instead of leaving the matter to private initiative? Do you understand that any large percentage of youths in the Roman State ever attended any school?
16. Why do older people usually oppose changes in school work manifestly needed to meet changing national demands?
17. Compare the difficulties met with in learning to read Greek and Latin. Either and English.
18. How do you account for the much smaller emphasis on literature and music in the elementary instruction at Rome than at Athens? How for the much larger emphasis on formal grammar in the secondary schools at Rome?
19. What subjects of study as we now know them were included in the Roman study of grammar and rhetoric?
20. How do you explain the greater emphasis placed by the Romans on secondary education than on elementary education?
21. What particular Roman need did the higher schools of oratory and rhetoric supply?

22. What does the exclusive devotion of these schools to such studies indicate as to professional opportunities at Rome?
23. How do you account for the continuance of these schools in favor, and for the aid and encouragement they received from the later Emperors, when the very nature of the Empire in large part destroyed the careers for which they trained?
24. Compare Rome and the United States in their attitudes toward foreign-born peoples.

SELECTED READINGS

In the accompanying *Book of Readings* the following selections are reproduced:

12. The Laws of the Twelve Tables.
13. Cicero: Importance of the Twelve Tables in Education.
14. Schreiber: A Roman Farmer's Calendar.
15. Polybius: The Roman Character.
16. Mommsen: The Grave and Severe Character of the Earlier Romans.
17. Epitaph: The Education of Girls.
18. Marcus Aurelius: The Old Roman Education described.
19. Tacitus: The Old and the New Education contrasted.
20. Suetonius: Attempts to Prohibit the Introduction of Greek Higher Learning.
 (*a*) Decree of the Roman Senate, 161 B.C.
 (*b*) Decree of the Censor, 92 B.C.
21. Vergil: Difficulty experienced in Learning to Read.
22. Horace: The Education given by a Father.
23. Martial: The Ludi Magister.
 (*a*) To the Master of a Noisy School.
 (*b*) To a Schoolmaster.
24. Cicero: Oratory the Aim of Education.
25. Quintilian: On Oratory.
26. Constantine: Privileges granted to Physicians and Teachers.

QUESTIONS ON THE READINGS

1. Give reasons why the Laws of the Twelve Tables (12) were considered of such fundamental importance (13) in the education of the early Roman boy? How do you explain their being supplanted later by the Latinized *Odyssey*?
2. What does the Farmer's Calendar (14) reveal as to the character of Roman life?
3. Contrast the Roman character (15, 16) with that of the Athenian.
4. Compare the education of a Roman matron, as revealed by the epitaph (17), with that of a girl in later American colonial times.
5. After reading Marcus Aurelius (18) and Tacitus (19), what is your judgment as to the relative merits of the old and the new education: (*a*) as a means of training youths? (*b*) as adapted to the changed conditions of Imperial Rome?
6. How do you account for the attempts of the conservative officials of the State to prohibit the introduction of Greek higher schools (20 a-b) proving so unsuccessful?
7. Compare the difficulties involved in learning to read Greek (Fig. 6) and Latin (21). Either and English.
8. What type of higher educational advantages does the selection from

Horace (**22**) indicate as prevailing in Roman cities? Compare with present-day advanced education.

9. What do Martial's Epigrams to the Roman schoolmasters (**23 a-b**) indicate as to the nature of the schools, school discipline, and social status of the Roman primary teacher?
10. Do the selections from Cicero (**24**) and Quintilian (**25**) satisfy you that oratory was a sufficiently broad idea for the higher education of youths under the Empire? Why?
11. What does the decree of Constantine (**26**) indicate as to the social status of the higher teachers under the Empire?

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CHAPTER IV

THE RISE AND CONTRIBUTION OF CHRISTIANITY

I. THE RISE AND VICTORY OF CHRISTIANITY

Religions in the Roman world. As was stated in the preceding chapter (p. 58), the Roman state religion was an outgrowth of the religion of the home. Just as there had been a number of fireside deities, who were supposed to preside over the different activities of the home, so there were many state deities who were supposed to preside over the different activities of the State. In addition, the Romans exhibited toward the religions of all other peoples that same tolerance and willingness to borrow which they exhibited in so many other matters. Certain Greek deities were taken over and temples erected to them in Rome, and new deities, to guard over such functions as health, fortune, peace, concord, sowing, reaping, etc., were established.[1] Extreme tolerance also was shown toward the special religions of other peoples who had been brought within the Empire, and certain oriental divinities had even been admitted and given their place in Rome.

Like many other features of Roman life, their religion was essentially of a practical nature, dealing with the affairs of every-day life, and having little or no relation to personal morality.[2] It promised no rewards or punishments or hopes for a future life, but rather, by uniting all citizens in a common reverence and fear of certain deities, helped to unify the Empire and hold it together. After the death of Augustus (14 A.D.), the Roman Senate deified the Emperor and enrolled his name among the gods, and Emperor worship was added to their ceremonies. This naturally spread rapidly throughout the Empire, tended to unite all classes in

[1] The Farmer's Calendar, given in the accompanying *Book of Readings* (**R. 14**), illustrates very well the gods and sacrifices for one phase of Roman life. Petronius, in his *Satires*, says, "Our country is so full of divinities that it is much easier to find a god than a man."

[2] "The chief objects of pagan religion were to foretell the future, to explain the universe, to avert calamity, and to obtain the assistance of the gods. They contained no instruments of moral teaching analogous to our institution of preaching, or to the moral preparation for the reception of the sacrament, or to confession, or to the reading of the Bible, or to religious education, or to united prayer for spiritual benefits. To make men virtuous was no more the function of the priest than of the physician." (Lecky, W. E. H., *History of European Morals*, chap. IV.)

allegiance to the central government at Rome, and seemed to form the basis for a universal religion for a universal empire.

Feeling of need for something more. As an educated class arose in Rome, this mixture of diverse divinities failed to satisfy; the Roman religion, made up as it was of state and parental duties and precautions, lost with them its force; and the religious ceremonies of the home and the State lost for them their meaning. The mechanical repetition of prayers and sacrifices made no appeal to the emotions or to the moral nature of individuals, and offered no spiritual joy or consolation as to a life beyond. The educated Greeks before had had this same feeling, and had indulged in much speculation as to the moral nature of man. Many educated Romans now turned to the Greek philosophers for some more philosophical explanation of the great mystery of life and death.

Of all the philosophies developed in the philosophical schools of Athens, the one that made the deepest appeal to the practical Roman mind was that of the Stoics, founded by Zeno, 308 B.C. Virtue, claimed the Stoics, consists in so living that one's life is in accordance with that Universal Reason which rules the world. Riches, position, fame, success — these count for but little. He who trains himself to be above grief, hope, joy, fear, and the ills of life — be he slave or peasant or king — may be happy because he is virtuous. Reason, rather than the feelings, is the proper rule of life. The Stoics also preached the brotherhood of man, and to a degree expressed a humble reliance on a providence which controlled affairs. This philosophy in a way met the need for a religion among the better-educated Romans, and made considerable headway during the early days of the Empire.[1] While serving as a sort of religion for those capable of embracing it, it was too intellectual to reach more than a few, and was not adapted to become a universal religion for all sorts and conditions of men. What was needed was a new moral philosophy or religion that would touch all mankind. To do this it must appeal to the emotions more than to the intellect. Such a religion was at this time taking shape and gathering force and strength in a remote corner of the Empire.

[1] Seneca (4–65 A.D.), the tutor of the Emperor Nero, and the Greek freedman Epictetus (d. 100 A.D.) both expounded Stoicism at Rome during the first Christian century, and the *Thoughts* of the Emperor Marcus Aurelius (161–180 A.D.) represents one of the finest expositions of the application of this philosophy to the problems of human life.

Where this new religion arose. Far to the eastern end of the Mediterranean there had long lived a branch of the Semitic race, which had developed a national character and made a contribution of first importance to the religious thought of the world. These were the Hebrew people who, leaving Egypt about 1500 B.C., in the Exodus, had come to inhabit the land of Canaan, south of Phœnicia and east and north of Egypt. From a wandering, pastoral people they had gradually changed to a settled, agricultural people, and had begun the development of a regular State. Unwilling, however, to bear the burdens of a political State, and objecting to taxation, a standing army, and forced labor for the State, the nationality which promised at one time fell to pieces, and the land was overrun by hostile neighbors and the people put under the yoke. After a sad and tempestuous history, which culminated in the destruction of Jerusalem by the Romans in 70 A.D., the inhabitants were sold into slavery and dispersed throughout the Roman Empire.

These people developed no great State, and made no contributions to government or science or art. Their contribution was along religious lines, and so magnificent and uplifting is their religious literature that it is certain to last for all time. Alone among all eastern people they early evolved the idea of one omnipotent God. The religion that they developed declared man to be the child of God, erected personal morality and service to God as the rule of life, and asserted a life beyond the grave. It was about these ideas that the whole energy of the people concentrated, and religion became the central thought of their lives. This religion, unlike the other religions of the Mediterranean world, emphasized duty to God, service, personal morality, chastity, honesty, and truth as its essential elements. The Law of Moses became the law of the land. Woman was elevated to a new place in the life of the ancient world.[1] Children became sacred in the eyes of the people. Their literary contribution, the Old Testament — written by a series of patriarchs, lawgivers, prophets, and priests — pictures, often in sublime language, the various migrations, deliverances, calamities, and religious hopes, aspirations, and experiences of this Chosen People.

The unity of this people. Just before their country was overrun and they were carried captive to Babylon, in 588 B.C., the

[1] See Proverbs, XXXI, for a good statement of the ancient Hebrew ideal of womanhood.

Pentateuch [1] had been reduced to writing and made an authoritative code of laws for the people. This served as a bond of union among them during the exile, and after their return to Palestine, in 538 B.C., the study and observance of this law became the most important duty of their lives. The synagogue was established in every village for its exposition, where twice on every Sabbath day the people were to gather to hear the law expounded. A race of *Scribes*, or scripture scholars, also arose to teach the law, as well as means for educating additional scribes. They were to interpret the law, and to apply it to the daily lives of the people. As the law was a combination of religious, ceremonial, civil, and sanitary law, these scribes became both teachers and judges for the people. In time they became the depositaries of all learning, superseded the priesthood, and became the leaders (*rabbins*, whence *rabbi*) of the people. "The voice of the rabbi is the voice of God," says the Talmud, a collection of Hebrew customs and traditions, with comments and interpretations, written by the rabbis after 70 B.C. By most Jews this is held to be next in sacredness to the Old Testament (**R. 27**).

Realizing, after the return from captivity, that the future existence of the Hebrew people would depend, not upon their military strength, but upon their moral unity, and that this must be based upon the careful training of each child in the traditions of his fathers, the leaders of the people began the evolution of a religious school system to meet the national need. Realizing, too, that parents could not be depended upon in all cases to provide this instruction, the leaders provided it and made it compulsory. Great open-air Bible classes were organized at first, and these were gradually extended to all the villages of the country. Elementary schools were developed later and attached to the synagogues, and finally, in 64 A.D., the high priest, Joshua ben Gamala, ordered the establishment of an elementary school in every village, made attendance compulsory for all male children, and provided for a combined type of religious and household instruction at home for all girls. Reading, writing, counting, the history of the Chosen People, the poetry of the Psalms, the Law of the Pentateuch, and a part of the Talmud constituted the subject-matter of instruction. The instruction was largely oral,

[1] This collective term is applied to the first five books of the Old Testament, and includes Genesis, Exodus, Leviticus, Numbers, and Deuteronomy. These five books form a wonderful collection of the historical and legal material relating to the wanderings and experiences and practices of the people.

and learning by heart was the common teaching plan. The child was taught the Law of his fathers, trained to make holiness a rule of his life and to subordinate his will to that of the one God, and commanded to revere his teachers (R. 27) and uphold the traditions of his people.

After the destruction of Jerusalem (70 A.D.) and the scattering of the people, the school instruction was naturally more or less disrupted, but in one way or another the Hebrew people have ever since managed to keep up the training of rabbis and the instruction of the young in the Law and the traditions of their people, and as a consequence of this instruction we have to-day the interesting result of a homogeneous people who, for over eighteen centuries, have had no national existence, and who have been scattered and persecuted as have no other people. History offers us no better example of the salvation of a people by means of the compulsory education of all.

The new Christian faith. It was into this Hebrew race that Jesus was born,[1] and there he lived, learned, taught, made his disciples, and was crucified. Building on the old Hebrew moral law and the importance of the personal life, Jesus made his appeal to the individual, and sought the moral regeneration of society through the moral regeneration of individual men and women. This idea of individuality and of personal souls worth saving was a new idea in a world where the submergence of the individual in the State had everywhere up to that time been the rule. Even the Hebrews, in their great desire to perpetuate their race and faith, had suppressed and absorbed the individual in their religious State. The teachings of Jesus, on the other hand, with their emphasis on charity, sympathy, self-sacrifice, and the brotherhood of all men, tended to obliterate nationality, while the emphasis they gave to the future life, for which life here was but a preparation, tended to subordinate the interests of the State and withdraw the concern of men from worldly affairs. In a series of simple sermons, Jesus set forth the basis of this new faith which he, and after him his disciples, offered to the world.

At the time of his crucifixion his disciples numbered scarcely one hundred persons. For some years after his death his disciples

[1] Chapter 1 of the Gospel according to Saint Matthew gives, in detail (1–16), the genealogy of Jesus, concluding with the following verse:

"17. So all the generations from Abraham to David are fourteen generations; and from David until the carrying away into Babylon are fourteen generations; and from the carrying away into Babylon unto Christ are fourteen generations."

remained in Jerusalem, preaching that he was the Messiah or Christ, whom the Hebrew people had long expected, and making converts to the idea. Later in Samaria, Damascus, and Antioch they made additional converts among the Jews. Up to this point the Christians had been careful to keep up all the old Jewish customs, and it was even doubted at first whether any but Jews could properly be admitted to the new faith. A new convert, Saul of Tarsus, a Jew who had studied in the Greek university there and who afterwards became the Apostle Paul, did much to open the new faith to the Gentiles, as the men of other nations were known. Speaking Greek, and being versed in Greek philosophy, and especially Stoicism, he gave thirty years of most effective service to the establishment of Christian churches [1] in Asia Minor, Macedonia, Greece (**R. 29**), and Italy (**R. 28**). His work was so important that he has often been called the second founder of the Christian Church.

The challenge of Christianity. Into a Roman world that had already passed the zenith of its greatness came this new Christian faith, challenging almost everything for which the Roman world had stood. In place of Roman citizenship and service to the State as the purpose of life, the Christians set up the importance of the life to come. Instead of pleasure and happiness and the satisfaction of the senses as personal ends, the Christians preached denial of all these things for the greater joy of a future life. In a society built on a huge basis of slavery and filled with social classes, the Christians proclaimed the equality of all men before God. To a nation in which family life had become corrupt, infidelity and divorce common, and infanticide a prevailing practice, the Christians proclaimed the sacredness of the marriage tie and the family life, and the exposure of infants as simple murder. In place of the subjection of the individual to the State, the Christians demanded the subjection of the individual only to God. In place of a union of State and religion, the Christians demanded the complete separation of the two and the subordination of the State to the Church. Unlike all other religions that Rome had absorbed, the Christians refused to be accepted on any other than exclusive terms. The worship of all other gods the Christians held to be sinful idol-worship, a deadly sin in the eyes of God,

[1] To many of these churches he wrote a series of epistles. These constitute a little more than one fourth of the New Testament. See accompanying *Book of Readings* (or Romans, I, 1–17) for the introductory part of Paul's Epistle to the Romans.

and they were willing to give up their lives rather than perform the simplest rite of what they termed pagan worship (**R. 28**). To the deified Emperor the Christians naturally could not bend the knee (**Rs. 30 b, 31 a-b, 34**).

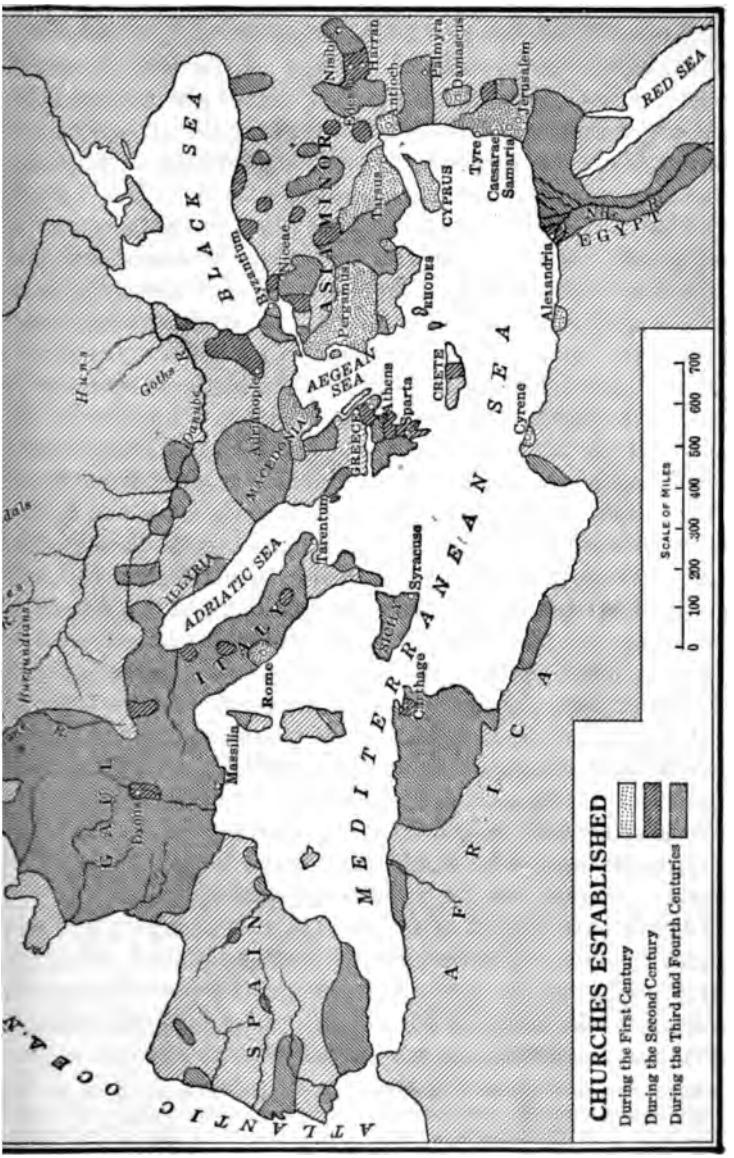
At first the new faith attracted but little attention from anybody of education or influence. Its converts were few during the first century, and these largely from among the lowest social classes in the Empire. Workmen and slaves, and women rather than men, constituted the large majority of the early converts to the new faith. The character of its missionaries [1] also was against it, and its challenge of almost all that characterized the higher social and governmental life of Rome was certain to make its progress difficult, and in time to awaken powerful opposition [2] to it. Yet, notwithstanding all these obstacles, its progress was relatively rapid.

The victory of Christianity. By the close of the first century there were Christian churches throughout most of Judea and Asia Minor, and in parts of Greece and Macedonia. During the second century other churches were established in Asia Minor, in Greece, and along the Black Sea, and at a few places in Italy and France; and before four centuries had elapsed from the crucifixion Christian churches had been established throughout almost all the Roman world. This is well shown by the map on the opposite page. The message of hope that Christianity had to offer to all; the simplicity of its organization and teachings; the great appeal which it made to the emotional side of human life; the hope of a future life of reward for the burdens of this which it extended to all who were weary and heavy laden; the positiveness of conviction of its apostles and followers; and the completeness with which it satisfied the religious need and longings of the time, first among the poor and among women and later among educated men — all helped the new faith to win its way. The unity in government that Rome had everywhere established; [3] the Roman

[1] "Its missionaries were Jews, a turbulent race, not to be assimilated, and as much despised and hated by pagan Rome as by the mediæval Christians. Wherever it attracted any notice, therefore, it seems to have been regarded as some rebel faction of the Jews, gone mad upon some obscure point of the national superstition — an outcast sect of an outcast race." (Adams, G. B., *Civilization during the Middle Ages*, p. 39.)

[2] "Starting from an insignificant province, from a despised race, proclaimed by a mere handful of ignorant workmen, demanding self-control and renunciation before unheard of, certain to arouse in time powerful enemies in the highly cultivated and critical society which it attacked, the odds against it were tremendous." (*Ibid.*, p. 41.)

[3] "It is not easy to imagine how, in the face of an Asia Minor, a Greece, an Italy



3. 27. THE GROWTH OF CHRISTIANITY TO THE END OF THE FOURTH CENTURY

peace (*pax Romana*) that Rome had everywhere imposed; the spread of the Greek and Latin languages and ideas throughout the Mediterranean world; the right of freedom of travel and speech enjoyed by a Roman citizen, and of which Saint Paul and others on their travels took advantage;[1] the scatterment of Jews throughout the Empire, after the destruction of Jerusalem in 70 A.D. — all these elements also helped.

That Christianity made its headway unmolested must not be supposed. While at first the tendency of educated Romans and of the government was to ignore or tolerate it, its challenge was so direct and provocative that this attitude could not long continue. Under the Emperor Claudius (41–54 A.D.) "all the Jews who were continually making disturbances at the instigation of one Chres tus" were unsuccessfully ordered banished from Rome. In the reign of the Emperor Nero, in 64 A.D., many horrible tortures were inflicted on this as yet small sect. It was not, however, till later, when the continued refusal of the Christians to offer sacrifices to the Emperor brought them under the law as disloyal (**R. 30 a**) subjects, that they began to be much punished for their faith (**R. 31 a-b**). The times were bad and were going from bad to worse, and the feelings of many were that the adverse conditions in the Empire — war, famine, floods, pestilence, and barbarian inroads — were due to the neglect of the old state religion and to the tolerance extended the vast organized defiance of the law by the Christians. In the first century they had been largely ignored. In the second, in some places, they were punished. In the third century, impelled by the calamities of the State and the urging of those who would restore the national religion to its earlier position, the Emperors were gradually driven to a series of heavy persecutions of the sect (**R. 30 a**). But it had now become too late. The blood of the martyrs proved to be the seed of the Church (**R. 35**). The last great persecution under the Emperor Diocletian, in 303 (**R. 33**), ended in virtual failure. In 311 the Emperor Galerius placed Christianity on a plane of

split up into a hundred small republics; of a Gaul, a Spain, an Africa, an Egypt, in possession of their old national institutions, the apostles could have succeeded, or even how their project could have been started. The unity of the Empire was a condition precedent of all religious proselytism on a grand scale if it was to place itself above the nationalities." (Renan, E., *Hibbert Lectures, 1880; Influence of Rome on the Christian Church.*)

[1] In Acts XXV, 1–12, it is recorded that the Apostle Paul, accused by the Jews and virtually on trial for his life before the provincial governor Festus, fell back on his Roman citizenship and successfully "appealed to Cæsar." (See footnote 3, page 57.)

equality with other forms of worship (**R. 36**). In 313 Constantine made it in part the official religion of the State,[1] and ordered freedom of worship for all. He and succeeding Emperors gradually extended to the Christian clergy a long list of important privileges (**R. 38**) and exemptions,[2] analogous to those formerly enjoyed by the teachers of rhetoric under the Empire (**R. 26**), and likewise began the policy, so liberally followed later, of endowing the Church. In 391 the Emperor Theodosius forbade all pagan worship, thus making the victory of Christianity complete. In less than four centuries from the birth of its founder the Christian faith had won control of the great Empire in which it originated. In 529 the Emperor Justinian ordered the closing of all pagan schools, and the University of Athens, which had remained the center of pagan thought after the success of Christianity, closed its doors. The victory was now complete.

The contribution of Christianity. We have now before us the third great contribution upon which our modern civilization has been built. To the great contributions of Greece and Rome, which we have previously studied, there now was added, and added at a most opportune time, the contribution of Christianity. In taking the Jewish idea of one God and freeing it from the narrow tribal limitations to which it had before been subject, Christianity made possible its general acceptance, first in the Roman world, and later in the Mohammedan world.[3] With this was introduced the doctrine of the fatherhood of God and his love for man, the equality before God of all men and of the two sexes, and the sacredness of each individual in the eyes of the Father. An entirely new conception of the individual was proclaimed to the world, and an entirely new ethical code was promulgated. The duty of all to make their lives conform to these new conceptions was asserted. These ideas imparted to ancient society a new

[1] "The miracle of miracles, greater than dried-up seas and cloven rocks, greater than the dead rising again to life, was when the Augustus on his throne, Pontiff of the gods of Rome, himself a god to the subjects of Rome, bent himself to become the worshiper of a crucified provincial of his Empire." (Freeman, E. A., *Periods of European History*, p. 67.)

[2] In 319 and 326 the clergy were exempted from all public burdens, and only the poor were to be admitted to the clergy. In 343 the clergy were exempted "from public burdens and from every disquietude of civil office." In 377 all clergy were exempted from personal taxes. (See **R. 38.**)

[3] From the Roman world the idea has spread, through the Greek Catholic Church, to Greece, parts of the Balkans, and Russia; through the Roman Catholic Church to all western Europe and the two Americas; and through the Protestant churches which sprang from the Roman Catholic by secession, and the Mohammedan faith, to include almost all the world. Only among uncivilized tribes and in Asia do we find any great number of fundamentally different religious conceptions.

evolved, first at Alexandria, and later at other places in the Empire, training schools for the leaders of the Church.

These came to be known as *catechetical* schools, from their oral questioning method of instruction, and this term was later applied to elementary religious instruction (whence *catechism*) throughout western Europe. Pantæus, a converted Greek Stoic, who became head of the catechumenal instruction at Alexandria, in 179 A.D., brought to the training of future Christian leaders the strength of Greek learning and Greek philosophic thought. He and his successors, Clement and Origen, developed here an important school of Christian theology where Greek learning was used to interpret the Scriptures and train leaders for the service of the Church. Similar schools were opened at Antioch, Edessa, Nisibis, and Cæsarea (See Map, p. 47), and these developed into a rudimentary form of theological schools for the education of the eastern Christian clergy. In these schools Christian faith and doctrine were formulated into a sort of system, the whole being tinctured through and through with Greek philosophic thought. Out of these schools came some of the great Fathers of the early Church; men who strove to uphold the pagan learning and reconcile Christianity and Greek philosophic thinking.[1]

Rejection of pagan learning in the West. In the West, where the leaders of the Church came from the less philosophic and more practical Roman stock, and where the contact with a decadent society wakened a greater reaction, the tendency was to reject the Hellenic learning, and to depend more upon emotional faith and the enforcement of a moral life. By the close of the third century the hostility to the pagan schools and to the Hellenic learning had here become pronounced (**R. 41**). Even the Fathers of the Latin Church, the greatest of whom had been

[1] *Justin Martyr* (105?–167), a former Greek teacher and philosopher, continued to follow his profession, wear his Greek philosopher's garb, and held that the teachings of Christianity were already contained in Greek philosophy, and that Plato and Socrates were Christians before the coming of the Christian faith.

Clement (c. 160–c. 215), the successor of Pantæus as head of the catechetical school at Alexandria, held to the harmony of the Gospels with philosophy, and that "Plato was Moses Atticized."

Origen (c. 185–c. 254), a pupil and successor of Clement, and the most learned of all the early Christian Fathers, labored to harmonize the Christian faith with Greek learning and philosophy, and did much to formulate the dogmas of the early Church.

Saint Basil (331–379) tried to allay the rising prejudice against pagan learning, and to show the helpfulness to the Christian life of the Greek literature and philosophy.

Gregory of Nazianzus (c. 330–c. 390) was filled with indignation and protested loudly at the closing of the pagan schools to Christians by the edict of the Emperor Julian, in 362.

teachers of oratory or rhetoric in Roman schools before their conversion,[1] gradually came to reject the pagan learning as undesirable for Christians and in a large degree as a robbery from God. Saint Augustine, in his *Confessions*, hopes that God may forgive him for having enjoyed Vergil. Jerome's dream [2] was known and quoted throughout the Middle Ages. Tertullian, in his *Prescription against Heresies*, exclaims:

> What indeed has Athens to do with Jerusalem? What concord is there between the Academy and the Church? What between heretics and Christians? . . . Away with all attempts to produce a mottled Christianity of Stoic, Platonic, and dialectic composition.

Gregory the Great, Pope of the Church from 590 to 604, and who had been well educated as a youth in the surviving Roman-type schools, turned bitterly against the whole of pagan learning. "I am strongly of the opinion," he says, "that it is an indignity that the words of the oracle of Heaven should be restrained by the rules of Donatus" (grammar). In a letter to the Bishop of Vienne he berates him for giving instruction in grammar, concluding with — "the praise of Christ cannot lie in one mouth with the praise of Jupiter. Consider yourself what a crime it is for bishops to recite what would be improper for religiously-minded laymen."

As a result Hellenic learning declined rapidly in importance in the West as the Church attained supremacy, and finally, in 401, the Council of Carthage, largely at the instigation of Saint Augustine, forbade the clergy to read any pagan author. In time Greek learning largely died out in the West, and was for a time almost entirely lost. Even the Greek language was forgotten, and was not known again in the West for nearly a thousand years.[3]

The Church perfects a strong organization. As was previously stated (p. 92), but little need was felt during the first two centu-

[1] *Tertullian* (c. 150–230) had been well educated in Greek literature and philosophy, and had attained distinction as a lawyer. *Saint Jerome* (c. 340–420) was saturated with pagan learning, but later advised against it. *Saint Augustine* (354–430), the master mind among the Latin Fathers, was for years a teacher of oratory and rhetoric in Roman schools, and had written part of an encyclopædia on the liberal arts before his conversion. Many others who became prominent in the Western Church had in their earlier life been teachers in the Roman higher schools.

[2] Dreaming that he had died and gone to Heaven, he was asked, "Who art thou?" On replying, "A Christian," he heard the awful judgment, "It is false: thou art no Christian; thou art a Ciceronian; where the treasure is, there the heart is also."

[3] The knowledge of Greek remained alive longer in Ireland than anywhere else in the western world, being known there as late as the seventh century. Greek was also preserved in parts of Spain for two centuries after it had died out in Italy.

ries for a system of belief or church government. As the expected return of Christ did not take place, and as the need for a formulation of belief and a system of government began to be felt, the next step was the development of these features. The system of belief and the ceremonials of worship finally evolved are more the products of Greek thought and practices of the East, while the form of organization and government is derived more from Roman sources. In the second century the Old Testament was translated into Greek at Alexandria, and the "Apostles' Creed" was formulated. During the third century the writings deemed sacred were organized into the New Testament, also in Greek. In 325 the first General Council of the Church was held at Nicæa, in Asia Minor. It formulated the Nicene Creed (**R. 42**), and twenty canons or laws for the government of the Church. A second General Council, held at Constantinople in 381, revised the Nicene Creed and adopted additional canons.



FIG. 28.
A BISHOP
Seventh Century
(Santo Venanzio, Rome)

The great organizing genius of the western branch of the Church was Saint Augustine (354–430). He gave to the Western or Latin Church, then beginning to take on its separate existence, the body of doctrine needed to enable it to put into shape the things for which it stood. The system of theology evolved before the separation of the eastern and western branches of the Church was not so finished and so finely speculative as that of the Greek branch, but was more practical, more clearly legal, and more systematically organized.

The influence of Rome was strong also in the organization of the system of government finally adopted for the Church. There being no other model, the Roman governmental system was copied. The bishop of a city corresponded to the Roman municipal officials; the archbishop of a territory to the governor of a province; and the patriarch to the ruler of a division of the Empire. As Rome had been a universal Empire, and as the city of Rome had been the chief governing city,[1] the idea of a universal Church was natural and the

[1] In the West there was no other great city than Rome. At the period of its maximum greatness, in the first century B.C., it was a city of approximately 450,000 people.

supremacy of the Bishop of Rome was gradually asserted and determined.[1]

A State within a State. There was thus developed in the West, as it were a State within a State. That is, within the Roman Empire, with its Emperor, provincial governors, and municipal officials, governing the people and drawing their power from the Roman Senate and imperial authority, there was also gradually developed another State, consisting of those who had accepted the Christian faith, and who rendered their chief allegiance, through priest, bishop, and archbishop, to a central head of the Church who owed allegiance to no earthly ruler. That Christianity, viewed from the governmental point of view, was a serious element of weakness in the Roman State and helped its downfall, there can be no question. In the eastern part of the Empire the Church was always much more closely identified with the State. Fortunately for civilization, before the Roman Empire had fallen and the impending barbarian deluge had descended, the Christian Church had succeeded in formulating a unifying belief and a form of government capable of commanding respect and of enforcing authority, and was fast taking over the power of the State itself.

The cathedral or episcopal schools. The first churches throughout the Empire were in the cities, and made their early converts there.[2] Gradually these important cities evolved into the residences of a supervising priest or bishop, the territory became known as a *bishopric*, and the church as a *cathedral church*. In time, also, some of the outlying territory was organized into parishes, and churches were established in these. These were made tributary to and placed under the direction of the bishop of the large central city. To supply clergy for these outlying parishes came to be one of the functions of the bishop, and, to insure properly trained clergy and to provide for promotions in the clerical ranks, schools of a rudimentary type were established in connection with the cathedral churches. These came to be known as *cathedral*, or *episcopal* schools. At first they were probably under the immediate charge of the bishop, but later, as his functions

[1] After many struggles and conflicts between the Bishops of Constantinople, Alexandria, and Rome, the Bishop of Rome was finally recognized by the second great Church Council, held at Constantinople in 381, as the head of the entire Church (Canon 3), corresponding to the Emperor on the political side of the dying Empire. The separation of the eastern and western churches was rapid after this time. (See Map, p. 103.)

[2] The word *pagan* as applied to unbeliever illustrates this progress of the Church, being derived from the Latin *paganus*, meaning countryman, villager, rustic.

increased, the school was placed under a special teacher, known as a *Scholasticus*, or *Magister Scholarum*, who directed the cathedral school, assisted the bishop, and trained the future clergy. As the pagan secondary schools died out, these cathedral schools, together with the monastic schools which were later founded, gradually replaced the pagan schools as the important educational institutions of the western world. In these two types of schools the religious leaders of the early Middle Ages were trained.

The monastic organization. In the early days of Christianity, it will be remembered (p. 87), the Christian convert held himself apart from the wicked world all about him, and had little to do with the society or the government of his time. He regarded the Church as having no relationship to the State. As the Church grew stronger, however, and became a State within a State, the Christian took a larger and larger part in the world around him, and in time came to be distinguished from other men by his profession of the Christian religion rather than by any other mark. Many of the early bishops were men of great political sagacity, fully capable of realizing to the full the political opportunities, afforded by their position, to strengthen the power of the Church. It was the work of men of this type that created the temporal power of the Church, and made of it an institution capable of commanding respect and enforcing its decisions.

To some of the early Christians this life did not appeal. To them holiness was associated with a complete withdrawal from contact with this sinful world and all its activities. Some betook themselves to the desert, others to the forests or mountains, and others shut themselves up alone that they might be undisturbed in their religious meditations. To such devoted souls monasticism, a scheme of living brought into the Christian world from the East, made a strong appeal. It provided that such men should live together in brotherhoods, renouncing the world, taking vows of poverty, chastity, and obedience, and devoting their lives to hard labor and the mortification of the flesh that the soul might be exalted and made beautiful. The members lived alone in individual cells, but came together for meals, prayer, and religious service.

As early as 330 a monastery had been organized on the island of Tebernæ, in the Nile. About 350 Saint Basil introduced monasticism into Asia Minor, where it flourished greatly. In 370 the Basilian order was founded. The monastic idea was soon trans-

ferred to the West, a monastery being established at Rome probably as early as 340. The monastery of Saint Victor, at Marseilles, was founded by Cassian in 404, and this type of monastery and monastic rule was introduced into Gaul, about 415. The monastery of Lerins (off Cannes, in southern France) was established in 405. During the fifth century a rapid extension of monastic foundations took place in western Europe, particularly along



FIG. 29. A BENEDICTINE MONK, ABBOT, AND ABBESS
(From a thirteenth-century manuscript)

the valleys of the Rhone and the Loire in Gaul. In 529 Saint Benedict, a Roman of wealth who fled from the corruption of his city, founded the monastery of Monte Cassino, south of Rome, and established a form of government, or rule of daily life, which was gradually adopted by nearly all the monasteries of the West. In time Europe came to be dotted with thousands of these establishments, many of which were large and expensive institutions both to found and to maintain.[1] By the time the barbarian invasions were in full swing monasticism had become an established institution of the Christian Church. Nunneries for women also were established early. A letter from Saint Jerome to Marcella, a Roman matron, in 382, in which he says that "no high-born lady at Rome had made profession of the monastic life . . . or had ventured . . . publicly to call herself a nun," would seem to imply that such institutions had already been established in Rome.

[1] See the accompanying *Book of Readings* for a drawing and detailed explanation of the monastery of Saint Gall, in Switzerland (**R. 69**). This was one of the most important monasteries of the Middle Ages.

Monastic schools. Poverty, chastity, obedience, labor, and religious devotion were the essential features of a monastic life. The Rule of Saint Benedict (**R. 43**) organized in a practical way the efforts of those who took the vows. In a series of seventy-three rules which he laid down, covering all phases of monastic life, the most important from the standpoint of posterity was the forty-eighth, prescribing at least seven hours of daily labor and two hours of reading "for all able to bear the load." From that part of the rule requiring regular manual labor the monks became the most expert farmers and craftsmen of the early Middle Ages, while to the requirement of daily reading we owe in large part the development of the school and the preservation of learning in the West during the long intellectual night of the mediæval period (**R. 44**).

Into these monastic institutions the *oblati*, that is, those who wished to become monks, were received as early as the age of twelve, and occasionally earlier (**R. 53a**). The final vows (**R. 53b**) could not be taken until eighteen, so during this period the novice was taught to work and to read and write, given instruction in church music, and taught to calculate the church festivals and to do simple reckoning. In time some condensed and carefully edited compendium of the elements of classical learning was also studied, and still later a more elaborate type of instruction was developed in some of the monasteries. This, however, belongs to a later division of this history, and further description of church and monastic education will be deferred until we study the intellectual life of the Middle Ages.

The education of girls. Aside from the general instruction in the practices of the church and home instruction in the work of a woman, there was but little provision made for the education of girls not desiring to join a convent or nunnery. A few, however, obtained a limited amount of intellectual training. The letter of Saint Jerome to the Roman lady Paula (**R. 45**), regarding the education of her daughter, is a very important document in the history of early Christian education for girls. Dating from 403, it outlines the type of training a young girl should be given who was to be properly educated in Christian faith and properly consecrated to God. What he outlined was education for nunneries, a number of which had been founded in the East and a few in the West. In the West these institutions later experienced an extensive development, and offered the chief opportunity for any intellectual education for women during the whole of the Middle Ages.

III. WHAT THE MIDDLE AGES STARTED WITH

What the Church brought to the Middle Ages. From a small and purely spiritual organization, devoting its energies to exhortation and to the moral regeneration of mankind, and without creed or form of government, as the Christian Church was in the first two centuries of its development, we have traced the organization of a body of doctrine, the perfection of a strong system of church government, and the development of a very limited educational system designed merely to train leaders for its service. We have also shown how it added to its early ecclesiastical organization a strong governmental organization, became a State within a State, and gradually came to direct the State itself. It was thus ready, when the virtual separation of the Roman Empire into an eastern and western division took place, in 395, and when the western division finally fell before the barbarian onslaughts, to take up in a way the work of the State, force the barbarian hordes to acknowledge its power, and begin the process of civilizing these new tribes and building up once more a civilization in the western world. In addition to its spiritual and political power, the Church also had developed, in its catechumenal instruction and in the cathedral and monastic schools, a very meager form of an educational system for the training of its future leaders and servants. A great change had now taken place in the nature of education as a preparation for life, and intellectual education, in the sense that it was known and understood in Greece and Rome, was not to be known again in the western world for almost a thousand years. The distinguishing characteristic of the centuries which follow, up to the Revival of Learning, are, first, a struggle against very adverse odds to prevent civilization from disappearing entirely, and later a struggle to build up new foundations upon which world civilization might begin once more where it had left off in Greece and Rome.

The three great contributions from the ancient world. Thus, before the Middle Ages began, the three great contributions of the ancient world which were to form the foundations of our future western civilization had been made. Greece gave the world an art and a philosophy and a literature of great charm and beauty, the most advanced intellectual and æsthetic ideas that civilization has inherited, and developed an educational system of wonderful effectiveness — one that in its higher development

in time took captive the entire Mediterranean world and profoundly modified all later thinking. Rome was the organizing and legal genius of the ancient world, as Greece was the literary and philosophical. To Rome we are especially indebted for our conceptions of law, order, and government, and for the ability to make practical and carry into effect the ideals of other peoples. To the Hebrews we are indebted for the world's loftiest conceptions of God, religious faith, and moral responsibility, and to Christianity and the Church we are indebted for making these ideas universal in the Roman Empire and forcing them on a barbaric world.

All these great foundations of our western civilization have not come down to us directly. The hostility to pagan learning that developed on the part of the Latin Fathers; the establishment of an eastern capital for the Empire at Constantinople, in 328; the virtual division of the Empire into an East and West, in 395; and the final division of the Christian Church into a Western Latin and an Eastern Greek Church, which was gradually effected, finally drove Greek philosophy and learning and the Greek language from the western world. Greek was not to be known again in the West for hundreds of years. Fortunately the Eastern Church was more tolerant of pagan learning than was the Western, and was better able to withstand conquest by barbarian tribes. In consequence what the Greeks had done was preserved at Constantinople until Europe had once more become sufficiently civilized and tolerant to understand and appreciate it. Hellenic learning was then handed back to western Europe, first through the medium of the Saracens, and then in that great Revival of Learning which we know as the *Renaissance*. Of the Latin literature and learning much was lost, and much was preserved almost by accident in the monasteries of mediæval Europe. Even the Church itself was seriously deflected from its earlier purpose and teachings during the long period of barbarism and general ignorance through which it passed, and only in modern times has it tried to come back to the spirit of the teachings of its founder.

The future story. For the long period of intellectual stagnation which now followed, the educational story is briefly told. But little formal education was needed, and that of but one main type. It was only after the Church had won its victory over the barbarian hordes, and had built up the foundations upon which a new civilization could be developed, that education in any broad

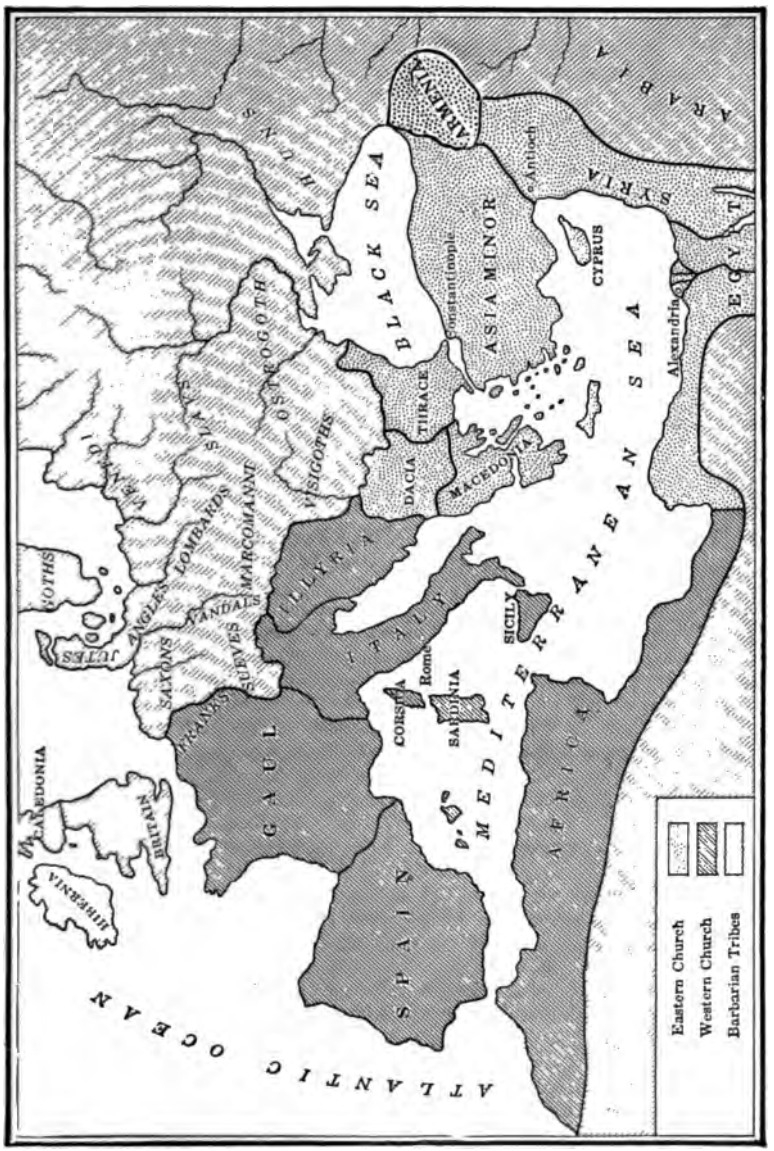


FIG. 30. SHOWING THE FINAL DIVISION OF THE EMPIRE AND THE CHURCH

The map also shows conditions as they were in Europe at the end of the fourth century A.D. Syria, Egypt, Africa, and a portion of Asia Minor were overwhelmed by the Saracens in the seventh century and became Mohammedan, but Constantinople held out until 1453. The eastern division eventually gave rise to the Greek Catholic Church of Greece, the Balkans, and Russia, while the western division became the Roman Catholic Church of western Europe. At Constantinople Greek learning was preserved until the West was again ready to receive it. The Eastern Empire for a time retained control of Sicily and southern Italy (the old *Magna Græcia*), but eventually these were absorbed by western or Latin Christianity.

and liberal sense was again needed. This required nearly a thousand years of laborious and painful effort. Then, when schools again became possible and learning again began to be demanded, education had to begin again with the few at the top, and the contributions of Greece and Rome had to be recovered and put into usable form as a basis upon which to build. It is only very recently that it has become possible to extend education to all.

In Part II we shall next trace briefly the intellectual life of the Middle Ages, and the reawakening, and in Part III we shall, among other things, point out the deep and lasting influence of the work of these ancient civilizations on our modern educational thoughts and practices.

QUESTIONS FOR DISCUSSION

1. Point out the many advantages of a universal religion for such a universal Empire as Rome developed, and the advantages of Emperor worship for such an Empire.
2. What do modern nations have that is much akin to Emperor worship?
3. Explain why Stoicism made such an appeal to the better-educated classes at Rome.
4. Why is an emotional faith better adapted to the mass of people than an intellectual one?
5. Explain how the Hebrew scribes, administering such a mixed body of laws, naturally came to be both teachers and judges for the people.
6. Illustrate how the Hebrew tradition that the moral and spiritual unity of a people is stronger than armed force has been shown to be true in history.
7. What great lessons may we draw from the work of the Hebrews in maintaining a national unity through compulsory education?
8. Why was Jesus' idea as to the importance of the individual destined to make such slow headway in the world? What is the status of the idea to-day (*a*) in China? (*b*) in Germany? (*c*) in England? (*d*) in the United States? Is the idea necessarily opposed to nationality or even to a strong state government?
9. Show how the political Church, itself the State, was the natural outcome during the Middle Ages of the teachings of the early Christians as to the relationship of Church and State.
10. Is it to be wondered that the Romans were finally led to persecute "the vast organized defiance of law by the Christians"?
11. Show how the Christian idea of the equality and responsibility of all gave the citizen a new place in the State.
12. State the reasons for the gradually increasing lack of sympathy and understanding between the eastern and western Fathers of the Church, and which finally led to the division of the Church.
13. Explain what is meant by "a State within a State" as applied to the Church of the third and fourth centuries. Did this prove to be a good thing for the future of civilization? Why?
14. Would Rome probably have been better able to withstand the barbarian invasions if Christianity had not arisen, or not? Why?

15. Show how the Christian attitude toward pagan learning tended to stop schools and destroy the accumulated learning.
16. What was the effect of the Christian attitude toward the care of the body, on scientific and medical knowledge, and on education? Was the Christian or the pagan attitude more nearly like that of modern times?
17. Why did the emphasis on form of belief, in the third and fourth centuries, come to supersede the emphasis on personal virtues and simple faith of the first and second centuries?
18. Compare the work of the Sunday School of to-day with the catechumenal instruction of the early Christians.

SELECTED READINGS

In the accompanying *Book of Readings* the following selections are reproduced:

27. The Talmud: Educational Maxims from.
28. Saint Paul: Epistle to the Romans.
29. Saint Paul: To the Athenians.
30. The Crimes of the Christians.
 (*a*) Minucius Felix: The Roman Point of View.
 (*b*) Tertullian: The Christian Point of View.
31. Persecution of the Christians as Disloyal Subjects of the Empire.
 (*a*) Pliny to Trajan.
 (*b*) Trajan to Pliny.
32. Tertullian: Effect of the Persecutions.
33. Eusebius: Edicts of Diocletian against the Christians.
34. Workman: Certificate of having Sacrificed to the Pagan Gods.
35. Kingsley: The Empire and Christianity in Conflict.
36. Lactantius: The Edict of Toleration by Galerius.
37. Theodosian Code: The Faith of Catholic Christians.
38. Theodosian Code: Privileges and Immunities granted the Clergy.
39. Apostolic Constitutions: How the Catechumens are to be instructed.
40. Leach: Catechumenal Schools of the Early Church.
41. Apostolic Constitutions: Christians should abstain from all Heathen Books.
42. The Nicene Creed of 325 A.D.
43. Saint Benedict: Extracts from the Rule of.
44. Lanfranc: Enforcing Lenten Reading in the Monasteries.
45. Saint Jerome: Letter on the Education of Girls.

QUESTIONS ON THE READINGS

1. Characterize the type of education to be provided and the status of the teacher, as shown in the selections from the Talmud (27). Compare with Rome. With Athens.
2. Characterize the attitude of Saint Paul toward the Romans (28). Does his description of Athens (29) tally with the description of the Athenians given in the text?
3. Was it possible for the Roman and the Christian to understand one another, thinking as they did in such different terms (30 a-b)?
4. Considering Pliny and Trajan (31 a-b) as Roman officials, with the Roman point of view, and taking into account the time in the history of world civilization, would you say that they were quite tolerant of rebels within the State?

5. Compare the privileges and immunities granted the clergy (38) with the privileges previously given by Constantine to physicians and teachers (26)
6. Characterize the irrepressible conflict as pictured by Kingsley (35). Name a few other somewhat similar conflicts in world history.
7. Outline the type of instruction for catechumens as directed in the Apostolic Constitutions (39).
8. What would have been the effect of the continued rejection of secular books called for in the Apostolic Constitutions (41)?
9. What was the governmental advantage of the adoption of the Nicene Creed (42)?
10. Why did the rule of Saint Benedict (43) requiring readings and study lead to the copying and preservation of manuscripts?
11. What does the selection from Lanfranc (44) indicate as to the state of monastic learning?
12. Was there anything pedagogically sound about the letter of Saint Jerome (45) on the education of girls? Discuss.

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Taylor, H. O. *Classical Heritage of the Middle Ages.*
Wishart, A. W. *Short History of Monks and Monasticism.*

PART II

THE MEDIÆVAL WORLD

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THE DELUGE OF BARBARISM
THE MEDIÆVAL STRUGGLE TO PRESERVE AND REËSTABLISH CIVILIZATION



CHAPTER V

NEW PEOPLES IN THE EMPIRE

The weakened Empire. Though the first and second centuries A.D. have often been called one of the happiest ages in all human history, due to a succession of good Emperors and peace and quiet throughout the Roman world,[1] the reign of the last of the good Emperors, Marcus Aurelius (161–180 A.D.), may be regarded as clearly marking a turning-point in the history of Roman society. Before his reign Rome was ascendant, prosperous, powerful; during his reign the Empire was beset by many difficulties — pestilence, floods, famine, troubles with the Christians, and heavy German inroads — to which it had not before been accustomed; and after his reign the Empire was distinctly on the defensive and the decline. Though the elements contributing to this change in national destiny had their origin in the changes in the character of the national life at least two centuries earlier, it was not until now that the Empire began to feel seriously the effects of these changes in a lowered vitality and a weakened power of resistance.

The virtues of the citizens of the early days of the Republic, trained according to the old ideas, had gradually given way in the face of the vices and corruption which beset and sapped the life of the upper and ruling classes in the later Empire. The failure of Rome to put its provincial government on any honest and efficient civil-service basis, the failure of the State to establish and direct an educational system capable of serving as a correc-

[1] The period from the reign of Augustus Cæsar through that of Marcus Aurelius (31 B.C.–192 A.D.) was known as "the good Roman peace." No other large section of the western world has ever known such unbroken peace and prosperity for so long a time. Piracy ceased upon the seas, and trade and commerce flourished. The cities and the great middle class in the population were prosperous. Travel was safe and common, and men traveled both for business and pleasure. The Christian State within a State had not yet taken form. Literature and learning flourished. The law became milder. The rights of the accused became better recognized. A certain broad humanity pervaded the administration of both law and government. There was much private charity. Hospitals were established. Women were given greater freedom, larger intellectual advantages, and a better position in the home than they were to know again until the nineteenth century. It was the Golden Age of the Empire. Toward the close of the period the Christian Father, Tertullian, wrote: "Every day the world becomes more beautiful, more wealthy, more splendid. No corner remains inaccessible. . . . Recent deserts bloom. . . . Forests give way to tilled acres. . . . Everywhere are houses, people, cities. Everywhere there is life."

tive of dangerous national tendencies, the lack of a guiding national faith, the gradual admission of so many Germans into the Empire, the great extent and demoralizing influence of slavery [1] — all contributed to that loss of national strength and resisting power which was now becoming increasingly evident. Other contributing elements of importance were the almost complete obliteration of the peasantry by the creation of great landed estates and cattle ranches worked by slaves, in place of the small farms of earlier days; the increase of the poor in the cities, and the declining birth-rate; the introduction of large numbers of barbarians as farmers and soldiers; and the demoralization of the city rabble by political leaders in need of votes. Captured slaves performed almost every service, and a lavish display of wealth on the part of a few came to be a characteristic feature of city life.[2] The great middle, commercial, and professional classes were still prosperous and contented, but luxury, imported vices, slavery, political corruption, and new ideals [3] had gradually sapped the old national vitality and destroyed the resisting power of the State in the face of a great national calamity. Rome now stood, much like



FIG. 31. A BODYGUARD OF GERMANS
A relief from the Column of Marcus Aurelius, at Rome, erected to celebrate his victories over the Marcomanni, and other German tribes.

[1] Slavery in Rome came to be much more demoralizing than ever was the case in the United States. Instead of an ignorant people of an inferior race, the Roman slave was often the superior of his master — the unfortunate captive in an unsuccessful war against an oppressor. The holding of such educated and intelligent people in slavery was far more degrading to a ruling people than would have been the case had their slaves been ignorant and of inferior racial stock.

[2] The Roman State had come to be essentially a collection of cities. Rome, Alexandria, Antioch, Corinth, Carthage, Ephesus, and Lyons were great cities, judged even by present-day standards, throbbing with varied industries and a strong intellectual life. In addition there were hundreds of other cities scattered all over the Empire, each with its own municipal life, while on the frontier were stockaded villages serving as centers of trade with the barbarian tribes beyond.

[3] Chief among the new ideals that sapped the old Roman strength must be mentioned the new Christian religion, with its doctrine of other-worldliness and its system of government not responsible to the Empire. Another influence was the rise of a super-civic philosophy, derived chiefly from the writings of Plato (see footnote 1, page 42), which held that certain men could be above the State and yet by their wisdom in part direct it. The two influences combined to undermine the resisting strength of the State.

the shell of a fine old tree, apparently in good condition, but in reality ready to fall before the blast because it had been allowed to become rotten at the heart. Sooner or later the boundaries of the Empire, which had held against the pressure from without for so long, were destined to be broken and the barbarian deluge from the north and east would pour over the Empire.

The boundaries of the Empire are broken. While temporary extensions of territory had at times been made beyond the Rhine and the Danube, these rivers had finally come to be the established boundaries of the Empire on the north, and behind these rivers the Teutonic barbarians, or *Germani*, as the Romans called them, had by force been kept. To do even this the Romans had been obliged to admit bands of Germans into the Empire, and had taken them into the Roman army as "allies," making use of their great love for fighting to hold other German tribes in check. In 166 A.D. the plague, brought back by soldiers returning from the East, carried off approximately half the population of Italy. This same year the Marcomanni (see Figure 18), a former friendly tribe, invaded the Empire as far as the head of the Adriatic Sea, and it required thirteen years of warfare to put them back behind the Danube. Even this was accomplished only by the aid of friendly German tribes. From this time on the Empire was more or less on the defensive, with the barbarian tribes to the north casting increasingly longing eyes toward "a place in the sun" and the rich plunder that lay to the south, and frequently breaking over the boundaries. Rome, though, was still strong enough to put them back again.

In 275 A.D., after a five years' struggle, the Eastern Emperor gave the province of Dacia, to the south of the Danube, to the Visigoths, in an effort to buy them off from further invasion and warfare. This eased the pressure for another century. In 378 A.D., now pressed on by the terrible Huns from behind, the Visigoths, as a body, invaded the Eastern Empire, and in the Battle of Adrianople, near Constantinople, defeated the Roman army, slew the Roman Emperor, definitely broke the boundaries of the Empire, and they and the Ostrogoths now moved southward and settled in Mœsia and Thrace. The Germans at Adrianople learned that they could beat the Roman legions, and from this time on it was they, and not the Romans, who named the terms of ransom and the price of peace. A few years later, under Alaric, the Visigoths invaded Greece, then turned westward

through Illyria to the valley of the Po, in northern Italy, which they reached in the year 400. In 410 the great calamity came when they captured and sacked Rome. The effect produced on the Roman world by the fall of the Eternal City, as the news of the almost incredible disaster penetrated to the remote provinces, was profound (R. 48). For eight hundred years Rome had not

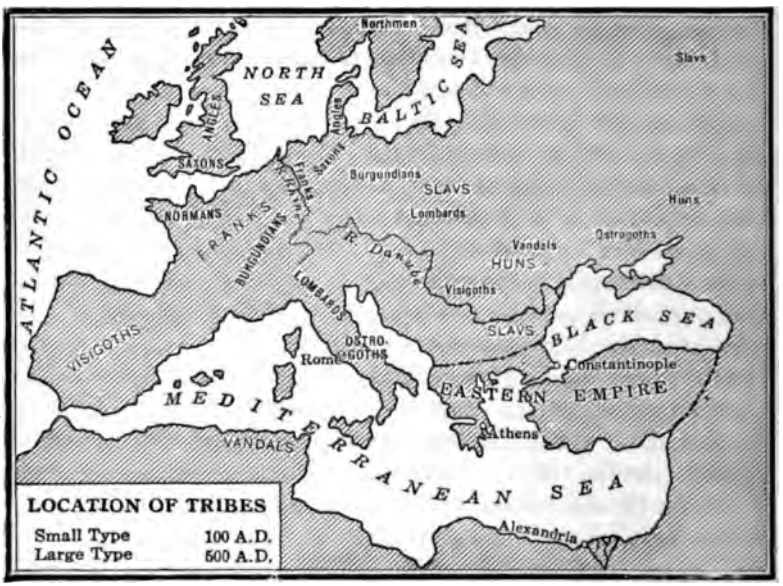


FIG. 32. THE GERMAN MIGRATIONS

The barriers of the Empire along the Rhine and the Danube now are broken down. Take a pencil and trace the route followed by each of these peoples.

been touched by foreign hands, and now it had been captured and plundered by barbarian hordes. It seemed to many as though the end of the world were approaching. The Visigoths now turned west once more, carrying with them the beautiful sister of the Emperor as a captive bride of the chief, and finally settled in Spain and southern Gaul, which provinces were thenceforth lost to Rome. This was the first of the great permanent inroads into the Empire, and from now on Roman resistance seemed powerless to stop the flood.

A period of tribal movements. The Hunnish pressure also started the Vandals and Suevi, and within fifty years they had been able to move across Germany, France, and Spain, plundering the cities on their way. Finally they crossed to the northern

coast of Africa, where they became noted as the great sea pirates of the Mediterranean. In 455 they crossed back to Italy, and Rome was sacked for the second time by barbarian hordes. The Huns, under the leadership of Attila, the so-called "Scourge of God," now moved in and ravaged Gaul (451) and northern Italy (452), and then, at the intercession of the Roman Pope Leo, were induced by a ransom price to return to the lower Danube, where they have since remained. In 476 the barbarian soldiers of the Empire, tired of camp life and demanding land on which they too might settle, rose in revolt, displaced the last of the Western Emperors, and elevated Odovacar, a tribesman from the north, as ruler in his stead. The Western Roman Empire was now at an end. In 493 Theodoric, King of the Ostrogoths, became king of Italy.

Between 443 and 485 the Angles, Saxons, and Jutes left their earlier homes in what is now Denmark and northwestern Germany, and overran eastern and southern Britain. In 486 the Franks, a great nation living along the lower Rhine, began to move, and within two generations had overrun almost all of Gaul. In 586 the Lombards invaded and settled the valleys of northern Italy, displacing the Ostrogoths there. Slavic tribes now moved into the Eastern Empire — Serbs and Bulgars — and settled in Mœsia and Thrace. Southeastern Europe thus became Slavic-Greek, as western Europe had become Teutonic-Latin. Figure 32 shows the results of these different migrations up to about 500 A.D.

Europe to be Teutonic-Latin. In the seventh century another great wave of people, of a different racial stock and religion — Semitic and Mohammedan — starting from Arabia and along the shores of the Red Sea, swept rapidly through Egypt and Africa and across into Spain and France. For a time it looked as though they might overrun all western Europe and bring the German tribes under subjection. Fortunately they were definitely stopped and decisively defeated by the Franks, in the great Battle of Tours, in 732. They also overran Syria and Persia, but were held in check in Asia Minor by the Eastern Empire, which did not completely succumb to barbarian inroads until Constantinople was taken by the Turks, in 1453.

The importance of the result, to the future of our western civilization, of this battle in the West can hardly be overestimated. The future of European government, law, education, and civiliza-

tion was settled on that Saturday afternoon in October, on the battle plains of Tours.[1] It was a struggle for mastery and dominion between the Aryan and Semitic races, between the Christian and Mohammedan religions, between the forces representing order on the one side and destruction on the other, and between races destined to succeed to the civilization of Greece and Rome and a race representing oriental despotism and static conditions.

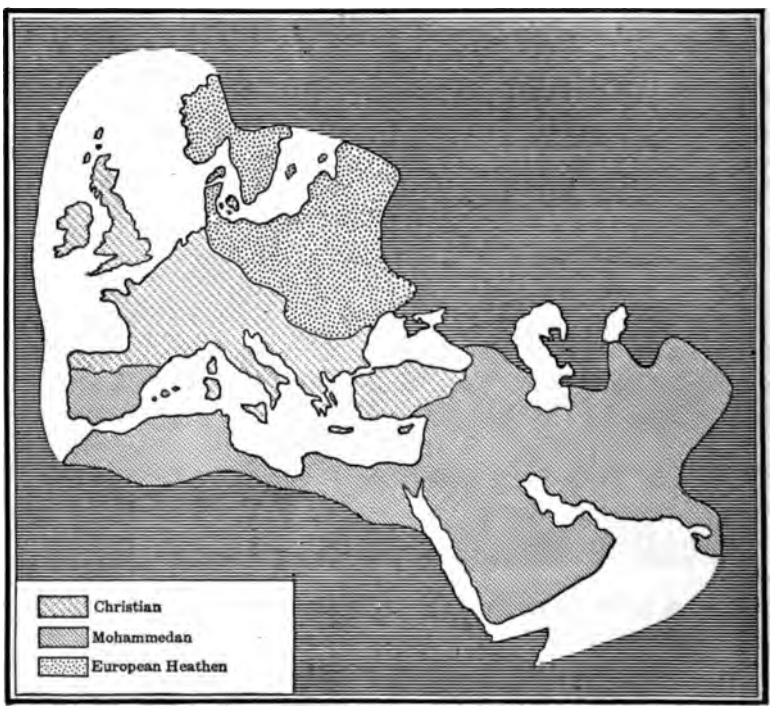


FIG. 33. THE KNOWN WORLD IN 800

This map shows the great extent of the Mohammedan conquests. The part marked as "European Heathen" was added to Christianity within the next few centuries, and became a part of our Latin-Teutonic or western civilization.

Driven back across the Pyrenees by the Franks, these people settled in Spain; later developed there, for a short period, a for-

[1] Not only was the future of western European civilization settled there, but that of North and South America as well. Had Saracenic civilization come to dominate Europe, the Koran might have been taught to-day in the theological schools of Boston, New York, Chicago, San Francisco, Buenos Aires, and Valparaiso, and the Christian religion been the possession only of the Greek and Russian churches, while our literature and philosophy and civilization would have been tinctured, through and through, with oriental ideas and Mohammedan conceptions.

the-time remarkable civilization, but one that only slightly influenced the current of European development; and then disappeared as a force in our western development and progress. We shall meet them again a little later, but only for a little while, and then they concern our western development no more.

Our interest from now on lies with the Teutonic-Latin peoples of western Europe, for it is through them that our western civilization has been worked out and has come down to us.

Who these invaders were. A long-continued series of tribal migrations, unsurpassed before in history, had brought a large number of new peoples within the boundaries of the old Empire. They finally came so fast that they could not have been assimilated even in the best days of Rome, and now the assimilative and digestive powers of Rome were gone. Tall, huge of limb, white-skinned, flaxen-haired, with fierce blue eyes, and clad in skins and rude cloths, they seemed like giants to the short, small, dark-skinned people of the Italian peninsula. Quarrelsome; delighting in fighting and gambling; given to drunkenness and gluttonous eating; possessed of a rude polytheistic religion in which *Woden*, the war god, held the first place, and Valhalla was a heaven for those killed in battle; living in rude villages in the forest, and maintaining themselves by hunting and fishing — it is not to be wondered that Rome dreaded the coming of these forest barbarians (**R. 46**).



FIG. 34. A GERMAN WAR CHIEF
Restored, and rather idealized
(From the Musée d'Artillerie at Paris)

The tribes nearest the Rhine and the Danube had taken on a little civilization from long contact with the Romans, but those farther away were savage and unorganized (**Rs. 46, 47**). In general they represented a degree of civilization not particularly different from that of the better American Indians in our colonial period,[1] though possessing a much larger ability to learn. The "two terrible centuries" which brought these new peoples into the

[1] It is hard for us to imagine what happened, for the Indians we know to-day represent a much higher grade of civilization than did the German invaders. If we could imagine the United States overrun by the Indians of a hundred and fifty years ago, as the German tribes overran the Roman Empire, and becoming the rulers of a people superior to them in numbers and intellect, we should have something analogous to the Roman situation.

Empire were marked by unspeakable disorder and frightful destruction. It was the most complete catastrophe that had ever befallen civilized society.

They settle down within the Empire. Finally, after a period of wandering and plundering, each of these new peoples settled down within the Empire as rulers over the numerically larger native Roman population, and slowly began to turn from hunting to a rude type of farming. For three or four centuries after the invasions ceased, though, Europe presented a dreary spectacle of ignorance, lawlessness, and violence. Force reigned where law and order had once been supreme. Work largely ceased, because there was no security for the results of labor. The Roman schools gradually died out, in part because of pagan hostility (all pagan schools were closed by imperial edict in 529 A.D.), and in part because they no longer ministered to any real need. The church and the monastery schools alone remained, the instruction in these was meager indeed, and they served almost entirely the special needs of the priestly and monastic classes. The Latin language was corrupted and modified into spoken dialects, and the written language died out except with the monks and the clergy. Even here it became greatly corrupted. Art perished, and science disappeared. The former Roman skill in handicrafts was largely lost. Roads and bridges were left without repair. Commerce and intercourse almost ceased. The cities decayed, and many were entirely destroyed (R. 49).



FIG. 35. ROMANS DESTROYING A GERMAN VILLAGE
(From the Column of Marcus Aurelius, at Rome)
Note the circular huts of reeds, without windows, and with but a single door.

The new ruling class was ignorant — few could read or write their names — and they cared little for the learning of Greece and Rome. Much of what was excellent in the ancient civilizations died out because these new peoples were as yet too ignorant to understand or use it, and what was preserved was due to the work of others than themselves. It was with such people and on such

a basis that it was necessary for whatever constructive forces still remained to begin again the task of building up new foundations for a future European civilization. This was the work of centuries, and during the period the lamp of learning almost went out.

Barbarian and Roman in contact. Civilization was saved from almost complete destruction chiefly by reason of the long and substantial work which Rome had done in organizing and governing and unifying the Empire; by the relatively slow and gradual coming of the different tribes; and by the thorough organization of the governing side of the Christian Church, which had been effected before the Empire was finally overrun and Roman government ceased. In unifying the government of the Empire and establishing a common law, language, and traditions, and in early beginning the process of receiving barbarians into the Empire and educating them in her ways and her schools,[1] Rome rendered the western world a service of inestimable importance and one which did much to prepare the way for the reception and assimilation of the invaders.[2] In the cities, which remained Roman in spirit even after their rulers had changed, and where the Roman population greatly preponderated even after the invaders had come, some of the old culture and handicrafts were kept up, and in the cities of southern Europe the municipal form of city government was retained. Roman law still applied to trials of Roman citizens, and many Roman governmental forms passed over to the invader chiefly because he knew no other. The old Roman population for long continued to furnish the clergy, and these, because of their ability to read and write, also became the secretaries and advisers of their rude Teutonic overlords. In one capacity or another they persuaded the leaders of the tribes to adopt, not only Christianity, but many of the customs and practices of the old civilization as well. These various influences

[1] As allies, citizens, soldiers, colonists, and slaves the Germans had long been filtering into the Roman world, and the Roman world was in part Germanized before the barriers were broken. These German-Romans helped to assimilate the Germans who came later, much as Italian-Americans in the United States help to receive and assimilate new Italians when they come.

[2] "The historical importance of the mere fact that it was an organic unity which Rome established, and not simply a collection of fragments artificially held together by military force, that the civilized world was made, as it were, one nation, cannot be overstated. . . . It was a union, not in externals merely, but in every department of thought and action; and it was so thorough, and the Gaul became so completely a Roman, that when the Roman government disappeared he had no idea of being anything else than a Roman. . . . It was because of this that, despite the fall of Rome, Roman institutions were perpetual." (Adams, G. B., *Civilization during the Middle Ages*, 2d ed., p. 30.)

at Iona, and began the conversion of the Scots. After the Angles and Saxons and Jutes had overrun eastern and southern Britain there was a period of several generations during which this portion of the island was given over to Teutonic heathenism. In 597 Saint Augustine, "the Apostle to the English," landed in Kent and began the conversion of the people, that year succeeding in converting Ethelbert, King of Kent. In 626 Edwin, King of Northumbria, was converted, and in 635 the English of Wessex accepted Christianity. The English at once became strong supporters of the Christian faith, and in 878 they forced the invading Danes to accept Christianity as one of the conditions of the Peace of Wedmore. (See Map, Figure 42.)

In 496 Clovis, King of the Franks, and three thousand of his followers were baptized, following a vow and a victory in battle; [1] in 587 Recarred, King of the Goths in Spain, was won over; and in 681 the South Saxons accepted Christianity. The Germans of Bavaria and Thuringia were finally won over by about 740. Charlemagne repeatedly forced the northern Saxons to accept Christianity, between 772 and 804, when the final submission of this German tribe took place. Finally, in the tenth century, Rollo, Duke of the Normans, was won (912); Boleslav II, King of the Bohemians, in 967; and the Hungarians in 972. In the tenth century the Slavs were converted to the Eastern or Greek type of Christianity, and Poland, Norway, and Sweden to the Western or Roman type. The last people to be converted were the Prussians, a half-Slavic tribe inhabiting East Prussia and Lithuania, along the eastern Baltic, who were not brought to accept Christianity, in name, until near the middle of the thirteenth century, though efforts were begun with them as early as 900. As late as 1230 they were still offering human sacrifices to their heathen gods to secure their favor, but soon after this date they were forced to a nominal acceptance of Christianity as a result of conquest by the "Teutonic Knights." It was thus a thousand years after its foundation before Europe had accepted in name the Christian faith. To change a nominal acceptance to some semblance of a reality has been the work of the succeeding centuries.

[1] Clotilda, wife of the heathen Clovis, was a Burgundian princess and a devout Christian, who had long tried to persuade her husband to accept her faith. In 496, during a battle with the Alemanni, near the present city of Strassburg, Clovis vowed that if the God of Clotilda would give him victory, he would do as she desired. The Alemanni were crushed, and he and three thousand of his chiefs were at once baptized.

Work of the Church during the Middle Ages. Everywhere throughout the old Empire, and far into the forest depths of barbarian lands, went bishops, priests, and missionaries, and there parishes were organized, rude churches arose, and the process of educating the fighting tribesmen in the ways of civilized life was carried out. It was not by schools of learning, but by faith and ceremonial that the Church educated and guided her children into the type she approved. Schools for other than monks and clergy for a time were not needed, and such practically died out. The Church and its offices took the place of education and exercised a wholesome and restraining influence over both young and old throughout the long period of the Middle Ages. These the Church in time taught the barbarian to respect. The great educational work of the Church during this period of insecurity and ignorance has seldom been better stated than in the following words by Draper:

Of the great ecclesiastics, many had risen from the humblest ranks of society, and these men, true to their democratic instincts, were often found to be the inflexible supporters of right against might. Eventually coming to be the depositaries of the knowledge that then existed, they opposed intellect to brute force, in many instances successfully, and by the example of the organization of the Church, which was essentially republican, they showed how representative systems may be introduced into the State. Nor was it over communities and nations that the Church displayed her chief power. Never in the world before was there such a system. From her central seat at Rome, her all-seeing eye, like that of Providence itself, could equally take in a hemisphere at a glance, or examine the private life of any individual. Her boundless influences enveloped kings in their palaces, and relieved the beggar at the monastery gate. In all Europe there was not a man too obscure, too insignificant, or too desolate for her. Surrounded by her solemnities, every one received his name at her altar; her bells chimed at his marriage, her knell tolled at his funeral. She extorted from him the secrets of his life at her confessionals, and punished his faults by her penances. In his hour of sickness and trouble her servants sought him out, teaching him, by her exquisite litanies and prayers, to place his reliance on God, or strengthening him for the trials of life by the example of the holy and just. Her prayers had an efficacy to give repose to the souls of his dead. When, even to his friends, his lifeless body had become an offense, in the name of God she received it into her consecrated ground, and under her shadow he rested till the great reckoning-day. From little better than a slave she raised his wife to be his equal, and, forbidding him to have more than one, met her recompense for those noble deeds in a firm friend at every fireside. Discountenancing all impure love, she put round that fireside the children

of one mother, and made that mother little less than sacred in their eyes. In ages of lawlessness and rapine, among people but a step above savages, she vindicated the inviolability of her precincts against the hand of power, and made her temples a refuge and sanctuary for the despairing and oppressed. Truly she was the shadow of a great rock in many a weary land.[1]

The civilizing work of the monasteries. No less important than the Church and its clergy was the work of the monasteries and their monks in building up a basis for a new civilization. These, too, were founded all over Europe. To make a map of western Europe showing the monasteries established by 800 A.D. would be to cover the map with a series of dots.[2] The importance of their work is better understood when we remember that the Germans had never lived in cities, and did not settle in them on entering the Empire. The monasteries, too, were seldom established in towns. Their sites were in the river valleys and in the forests (**R. 69**), and the monks became the pioneers in clearing the land and preparing the way for agriculture and civilization. Not infrequently a swamp was taken and drained. The Middle-Age period was essentially a period of settlement of the land and of agricultural development, and the monks lived on the land and among a people just passing through the earliest stages of settled and civilized life. In a way the inheritors of the agricultural and handicraft knowledge of the Romans, the monks became the most skillful artisans and farmers to be found, and from them these arts in time reached the developing peasantry around them. Their work and services have been well summed up by the same author just quoted, as follows:

It was mainly by the monasteries that to the peasant class of Europe was pointed out the way of civilization. The devotions and charities; the austerities of the brethren; their abstemious meal; their meager clothing, the cheapest of the country in which they lived; their shaven heads, or the cowl which shut out the sight of sinful objects; the long staff in their hands; their naked feet and legs; their passing forth on their journeys by twos, each a watch on his brother; the prohibitions

[1] Draper, John W., *Intellectual Development of Europe*, vol. II, pp. 145–46.

[2] The extent of the Benedictine order alone may be seen from the Benedictine statement that "Pope John XXII, who died in 1334, after an exact inquiry, found that, since the first rise of the order, there had been of it 24 popes, near 200 cardinals, 7000 archbishops, 15,000 bishops, 15,000 abbots of renown, above 4000 saints, and upwards of 37,000 monasteries. There had been likewise, of this order, 20 emperors, 10 empresses, 47 kings and above 50 queens, 20 sons of emperors and 48 sons of kings, about 100 princesses and daughters of kings and emperors, besides dukes, marquises, earls, countesses, etc., innumerable." From this it may be inferred how fully the Church was the State during the long period of the Middle Ages.

against eating outside of the wall of the monastery, which had its own mill, its own bakehouse, and whatever was needed in an abstemious domestic economy (Figure 38); their silent hospitality to the wayfarer, who was refreshed in a separate apartment; the lands around their buildings turned from a wilderness into a garden, and, above all, labor exalted and ennobled by their holy hands, and celibacy, forever, in the eye of the vulgar, a proof of separation from the world and a sacrifice to heaven — these were the things that arrested the attention of the barbarians of Europe, and led them on to civilization.[2]

The problem faced by the Middle Ages. That the lamp of learning burned low during this period of assimilation is no cause for wonder. Recovery from such a deluge of barbarism on a weakened society is not easy. In fact the recovery was a long and slow process, occupying nearly the whole of a thousand years. The problem which faced the Church, as the sole surviving force capable of exerting any constructive influence, was that of changing the barbarism and anarchy of the sixth century, with its low standards of living and lack of humane ideals, into the intelligent, progressive civilization of the fifteenth century. This was the work of the Middle Ages, and largely the work of the Christian Church. It was not a period of progress, but one of assimilation, so that a common western civilization might in time be developed out of the diverse and hostile elements mixed together by the rude force of circumstances. The enfeebled Roman race was to be reinvigorated by mixture with the youthful and vigorous Germans (R. 50); to the institutions of ancient society were to be added certain social and political institutions of the Germanic peoples; all were to be brought under the rule of a common Christian Church; and finally, when these people had become sufficiently civilized and educated to enable them to understand and appreciate, "nearly every achievement of the Greeks and the Romans in thought, science, law, and the practical arts" was to be recovered and made a part of our western civilization.

In this chapter we have dealt largely with the great fundamental movements which have so deeply influenced the course of human history. In the chapters which immediately follow we shall tell how learning was preserved during the period and what facilities for education actually existed; trace the more important efforts made to reëstablish schools and learning; and finally describe the culmination of the process of absorbing and educating

[1] Draper, John W., *Intellectual Development of Europe*, vol. I, p. 437.

the Germans in the civilization they had conquered that came in the great period of recovery of the ancient learning and civilization — the age of the Renaissance.

QUESTIONS FOR DISCUSSION

1. Do the peculiar problems of assimilation of the foreign-born, revealed to us by the World War, put us in a somewhat similar position to Rome under the Empire as relates to the need of a guiding national faith?
2. Outline how Rome might have been helped and strengthened by a national school system under state control.
3. Outline how our state school systems could be made much more effective as national instruments by the infusion into their instruction of a strong national faith.
4. Try to picture the results upon our civilization had western Europe become Mohammedan.
5. The movement of new peoples into the Roman Empire was much slower than has been the immigration of foreign peoples into the United States, since 1840. Why the difference in assimilative power?
6. How do you think the Roman provinces and Italy, after the tribes from the North had settled down within the Empire, compared with Mexico after the years of revolution with peons and brigands in control? With Russia, after the destruction wrought by the Bolshevists?
7. Explain the importance of the long civilizing and educating work of Rome among the German tribes, in preparing the means for the preservation of Roman institutions after the downfall of the Roman government.
8. What does the fact that Roman institutions and Roman thinking continued and profoundly modified mediæval life indicate as to the nature of Roman government and the Roman power of assimilation?
9. Though Rome never instituted a state school system, was there not after all large educational work done by the government through its intelligent administration?
10. Show how the breakdown of Roman government and Roman institutions was naturally more complete in Gaul than in northern Italy, and more complete in northern than in central or southern Italy, and hence how Roman civilization was naturally preserved in larger measure in the cities of Italy than elsewhere.
11. Show how the Christian Church, too, could not have completely dispensed with Roman letters and Roman civilization, had it desired to do so, but was forced of necessity to preserve and pass on important portions of the civilization of Rome.
12. What do you think would have been the effect on the future of civilization had the barbarian tribes overrun Spain, Italy, and Greece during the Age of Pericles?
13. What modern analogies do we have to the civilizing work of the monks and clergy during the Middle Ages?
14. Picture the work of the monasteries in handing on to western Europe the arts and handicrafts and skilled occupations of Rome. Cite some examples.
15. What civilizing problem, somewhat comparable to that of barbarian Europe, have we faced in our national history? Why have we been able to obtain results so much more rapidly?

SELECTED READINGS

In the accompanying *Book of Readings* the following selections are reproduced:

46. Cæsar: The Hunting Germans and their Fighting Ways.
47. Tacitus: The Germans and their Domestic Habits.
48. Dill: Effect on the Roman World of the News of the Sacking of Rome by Alaric.
49. Giry and Réville: Fate of the Old Roman Towns.
50. Kingsley: The Invaders, and what they brought.
51. General Form for a Grant of Immunity to a Bishop.
52. Charlemagne: Powers and Immunities granted to the Monastery of Saint Marcellus.

QUESTIONS ON THE READINGS

1. State the differences in character Cæsar observes (46) between the Gauls to the west of the Rhine and the Germans to the east.
2. What German characteristics that Tacitus describes (47) would prove good additions to Roman life?
3. Do the emotions of Saint Jerome on hearing of the sacking of Rome (48) reveal anything as to the extent to which the Roman had become a Churchman and the Churchman a Roman? Illustrate.
4. Is it probable that a quarter-century of Bolsheviki rule in Russia would produce results comparable to those described by Giry and Réville (49)?
5. Is Kingsley right in stating (50) that the best elements of all the modern European peoples came from the barbarian invaders? State what seem to you to be the important contributions of barbarian invader, Roman, and Churchman.
6. Do the grants of privileges and immunities shown in the general form (51) and the specific form (52) seem to follow naturally from the earlier grants to physicians and teachers (26) and to the clergy (38)? Point out the relationship.

SUPPLEMENTARY REFERENCES

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CHAPTER VI

EDUCATION DURING THE EARLY MIDDLE AGES[1]

I. CONDITION AND PRESERVATION OF LEARNING

The low intellectual level. As was stated in the preceding chapter, the lamp of learning burned low throughout the most of western Europe during the period of assimilation and partial civilization of the barbarian tribes. The western portion of the Roman Empire had been overrun, and rude Germanic chieftains were establishing, by the law of might, new kingdoms on the ruins of the old. The Germanic tribes had no intellectual life of their own to contribute, and no intellectual tastes to be ministered unto. With the destruction of cities and towns and country villas, with their artistic and literary collections, much that represented the old culture was obliterated,[2] and books became more and more scarce.[3] The destruction was gradual, but by the beginning of the seventh century the loss had become great. The Roman schools also gradually died out as the need for an education which prepared for government and gave a knowledge of Roman law passed away, and the type of education approved by the Church was left in complete control of the field. As the security and leisure needed for study disappeared, and as the only use for learning was now in the service of the Church, education became limited to the narrow lines which offered such preparation and to the few who needed it. Amid the ruins of the ancient civilization the Church stood as the only conservative and regenerative force, and naturally what learning remained passed into its hands and under its control.

The result of all these influences and happenings was that by

[1] From the sixth to the twelfth centuries.

[2] The story which has come down to us of the German warrior who, on being shown into an anteroom, saw some ducks swimming in the floor and dashed his battle-axe at them to see if they were real, thus ruining the beautiful mosaic, is typical of the time.

[3] During the period of Rome's greatness the publishing business became an important one. Manuscripts were copied in numbers by trained writers, and books were officially published. Both public and private libraries became common, men of wealth often having large libraries. These were found in the provincial towns as well as in the large Italian cities, and in country villas as well as in town houses.

By the beginning of the eighth century books had become so scarce that monasteries guarded their treasures with great care (**R. 65**), and books were borrowed from long distances that copies might be made.

the beginning of the seventh century Christian Europe had reached a very low intellectual level, and during the seventh and eighth centuries conditions grew worse instead of better. Only in England and Ireland, as will be pointed out a little later, and in a few Italian cities, was there anything of consequence of the old Roman learning preserved. On the Continent there was little general learning, even among the clergy (**R. 64 a**). Many of the priests were woefully ignorant,[1] and the Latin writings of the time contain many inaccuracies and corruptions which reveal the low standard of learning even among the better educated of the clerical class. The Church itself was seriously affected by the prevailing ignorance of the period, and incorporated into its system of government and worship many barbarous customs and practices of which it was a long time in ridding itself. So great had become the ignorance and superstition of the time, among priests, monks, and the people; so much had religion taken on the worship of saints and relics and shrines; and so much had the Church developed the sensuous and symbolic, that religion had in reality become a crude polytheism instead of the simple monotheistic faith of the early Church. Along scientific lines especially the loss was very great. Scientific ideas as to natural phenomena disappeared, and crude and childish ideas as to natural forces came to prevail. As if barbarian chiefs and robber bands were not enough, popular imagination peopled the world with demons, goblins, and dragons, and all sorts of superstitions and supernatural happenings were recorded. Intercommunication largely ceased; trade and commerce died out; the accumulated wealth of the past was destroyed; and the old knowledge of the known world became badly distorted, as is evidenced by the many crude mediæval maps. (See Figure 46.) The only scholarship of the time, if such it might be called, was the little needed by the Church to provide for and maintain its government and worship. Almost everything that we to-day mean by civilization in that age was found within the protecting walls of monastery or church, and these institutions were at first too busy building up the foundations upon which a future culture might rest to spend much time in preserving learning, much less in advancing it.

[1] Charlemagne (King of Frankland, 771–814), for example, found it necessary to order that priests and monks must show themselves capable of changing the wording of the masses for the living and the dead, as circumstances required, from singular to plural, or from masculine to feminine.

The monasteries develop schools. In this age of perpetual lawlessness and disorder the one opportunity for a life of repose and scholarly contemplation lay in the monasteries. Here the rule of might and force was absent (R. 52), and the timid, the devout,



FIG. 37. A TYPICAL MONASTERY OF SOUTHERN EUROPE

and the studiously inclined here found a refuge from the turbulence and brutality of a rude civilization. The early monasteries, and especially the monastery of Saint Victor, at Marseilles, founded by Cassian in 404, had represented a culmination of the western feeling of antagonism to all ancient learning, but with the founding of Monte Cassino by Saint Benedict, in 529 A.D., and the promulgation of the Benedictine rule (R. 43), a more liberal attitude was shown.[1] This rule was adopted generally by the monasteries throughout what is now Italy, Spain, France, Germany, and England, and the Benedictine became the type for the monks of the early Middle Ages. To this order we are largely indebted for the copying of books and the preservation of learning throughout the mediæval period.

The 48th rule of Saint Benedict, it will be remembered (R. 43), had imposed reading and study as a part of the daily duty of every monk, but had said nothing about schools. Subsequent regulations issued by superiors had aimed at the better enforcement of this rule (R. 44), that the monks might lead devout lives and know the Bible and the sacred writings of the Church. Imposed at first as a matter of education and discipline for the monks, this rule ultimately led to the establishment of schools and the

[1] Longfellow's poem *Monte Cassino* is interesting reading here. Of Benedict he says:

"He founded here his Convent and his Rule
Of prayer and work, and counted work as prayer;
The pen became a clarion, and his school
Flamed like a beacon in the midnight air."

development of a system of monastic instruction. As youths were received at an early age [1] into the monasteries to prepare for a monastic life, it was necessary that they be taught to read if they were later to use the sacred books. This led to the duty of instructing novices, which marks the beginning of monastic instruction for those within the walls. As books were scarce and at the same time necessary, and the only way to get new ones was to copy from old ones, the monasteries were soon led to take up the work once carried on by the publishing houses of ancient Rome, and in much the same way. This made writing necessary, and the novices had to be instructed carefully in this, as well as in reading.[2] The chants and music of the Church called for instruction of the novices in music, and the celebration of Easter and the fast and festival days of the Church called for some rudimentary instruction in numbers and calculation.

Out of these needs rose the monastery school, the copying of manuscripts, and the preservation of books. Due to their greater security and quiet the monasteries became the leading teaching institutions of the early part of the Middle-Age period, and those who wished their children trained for the service of the Church gave them to the monasteries (**R. 53 a**). The development of the monastic schools was largely voluntary, though from an early date bishops and rulers began urging the monasteries to open schools for boys in connection with their houses, and schools became in time a regular feature of the monastic organization. From schools only for those intending to take the vows (*oblati*), the instruction was gradually opened, after the ninth century, to others (*externi*) not intending to take the vows, and what came to be known as "outer" monastic schools were in time developed.

The monasteries became the preservers of learning. Another need developed the copying of pagan books, and incidentally the preservation of some of the best of Roman literature. The language of the Church very naturally was Latin, as it was a direct descendant of Roman life, governmental organization, citizenship, and education. The writings of the Fathers of the Western Church had all been in Latin, and in the fourth century the Bible

[1] Sometimes as early as eleven to twelve years of age. The novitiate course was two years, but as the vows could not be taken before eighteen, the course of instruction often covered six to eight years.

[2] To teach a novice to copy accurately a manuscript book was quite a different thing from the teaching of writing to-day, It was more nearly comparable to present-day instruction in lettering in a college engineering course, as it called for a degree of workmanship and accuracy not required in ordinary writing.

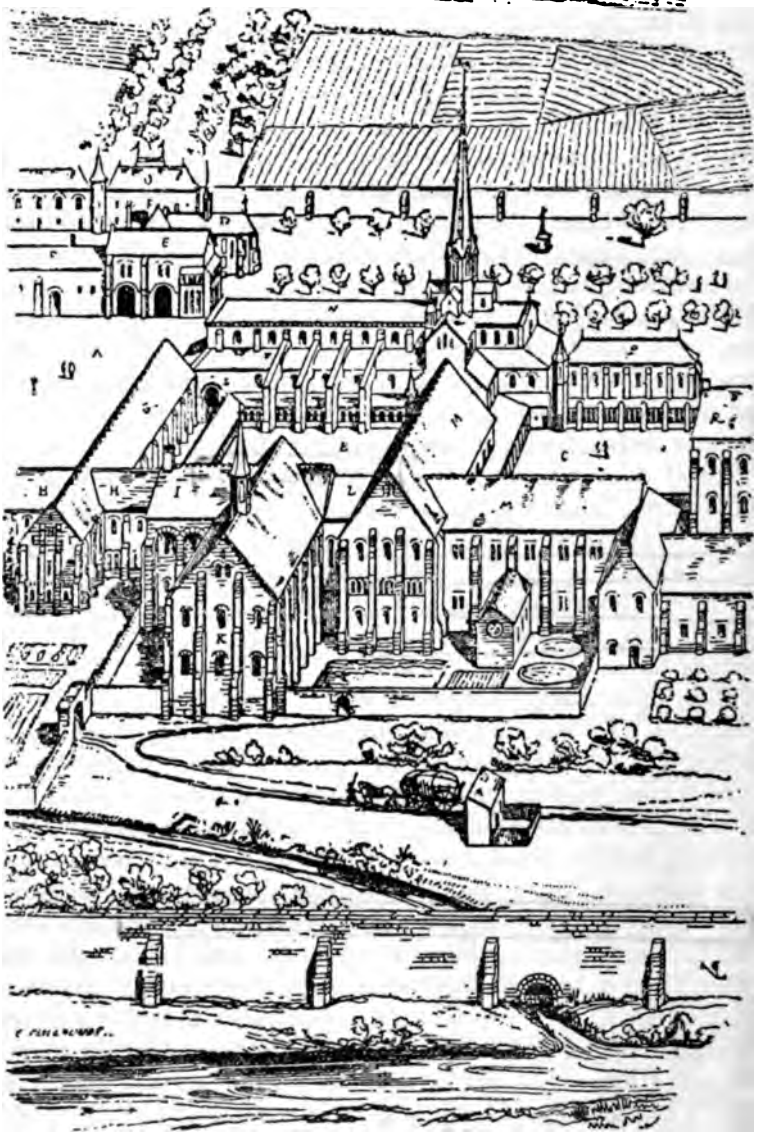


FIG. 38. BIRD'S-EYE VIEW OF A MEDIAEVAL MONASTERY

(From an engraving by Viollet-le-Duc, dated 1718, of the Cistercian Abbey of Citeaux, in France)

This monastery was founded in the forests of what is now northeastern France, in 1198 A.D., and was the first of a reformed Benedictine order, known as Cistercians. For an explanation of the monastery, see the opposite page.

had been translated from the Greek into the Latin. This edition, known as the *Vulgate*[1] *Bible*, became the standard for western Europe for ten centuries to come. The German tribes which had invaded the Empire had no written languages of their own, and their spoken dialects differed much from the Latin speech of those whom they had conquered. Latin was thus the language of all those of education, and naturally continued as the language of the Church and the monastery for both speech and writing. All books were, of course, written in Latin.

Under the rude influences and the general ignorance of the period, though, the language was easily and rapidly corrupted, and it became necessary for the monasteries and the churches to have good models of Latin prose and verse to refer to. These were best found in the old Latin literary authors — particularly Cæsar, Cicero, and Vergil. To have these, due to the great destruction of old books which had taken place during the intervening centuries, it was necessary to copy these authors,[2] as well as the Psalter, the Missal,[3] the sacred books, and the writings of

[1] The Vulgate, a Latin translation of the Bible made by Saint Jerome, at the close of the fourth century. The Old Testament he translated mostly from the Hebrew and Chaldaic, and the New Testament he revised from the older Latin versions. This is the only version of the Scriptures which the Roman Catholic Church admits as authentic.

[2] Letters from one monastery to another, and from one country to another, begging the loan of some ancient book, have been preserved in numbers. Lupus, Abbot of Ferrières in France, for example, wrote to Rome in 855, and addressing himself to the Pope in person, requested a complete copy of Cicero's *De Oratore*, which he desired.

[3] The Missal is a book containing the service of the mass for the entire year. The Psalter the book of Psalms.

Explanation of the Monastery opposite: The cross, by the roadside, indicates the entrance gate. Passing through the orchards and fields, the traveler reached the outer gate-house. At the almonry (*C*) food and drink were given out; on the second floor rooms for the night could be had; in the little chapel (*D*) prayers could be said; and in the stable (*F*) the traveler's horse could be cared for for the night. An inner gate through (*E*) opened into an inner court, around which were the barns, chicken-yards, cow-sheds, etc. The Abbot lived at *H*. *G* was a dormitory for the lay brothers who did the heavy work of the monastery, and who entered the church (*N*) at the rear through a special doorway (*S*). All of these buildings were considered as outside the monastery proper.

Inside were the great church (*N*), with the library (*P*) in the rear. Seven *scriptoria* are shown on the side of the library building. *M* was the large dormitory for the monks, and *R* the infirmary for old and sick brothers. *I* was the kitchen, *K* was the dining-hall (refectory), and *L* the stairs to the upper dormitory rooms. *C* and *E* are two cloisters with corridors on the four sides, somewhat similar to the cloisters shown for the monastery on Plate 1. The copying of books often took place in these cloisters, though a *scriptorium* was usually found under the library, the library proper, as in Plate 2, being on the second floor (*P*) and reached by a winding stair. A wall surrounded the monastery grounds, and a stream of running water passed through them.

the Fathers of the Church (**Rs. 55, 56**). It thus happened that the monasteries unintentionally began to preserve and use the ancient Roman books, and from using them at first as models for style, an interest in their contents was later awakened. While many of the monasteries remained as farming, charitable, and ascetic institutions almost exclusively, and were never noted for their educational work, a small but increasing number gradually accumulated libraries and became celebrated for their literary activity and for the character of their instruction. The monasteries thus in time became the storehouses of learning, the publishing houses of the Middle Ages (**Rs. 54, 55, 56**), teaching institutions of first importance, and centers of literary activity and religious thought, as well as centers for agricultural development, work in the arts and crafts, and Christian hospitality. Many developed into large and important institutions (**R. 69**).

The copying of manuscripts.[1] The work of the more important monasteries and the monastic churches in copying books was a service to learning of large future significance. While many of the books copied were for the promotion of the religious service, such as Missals and Psalters (**R. 55**), and many others were tales of saints and wearisome comments on the sacred writings, a few were old classical texts representing the best of Roman literary work. A few monastic chronicles and histories of importance were composed by the brothers, and also preserved for us by the copying process.

The production of a single book was a task of large proportions, and explains in part the small number of volumes the monasteries accumulated. After the raids of the Mohammedans across Egypt, in the seventh century, the supply of Egyptian papyrus stopped because of the interruption of communications, and the only writing material during the Middle Ages was the skin of sheep or goats or calves. Sheepskins were chiefly used, and a book of size might require a hundred or more skins. These were first soaked in limewater to loosen the hair, then scraped clean of hair and flesh, and then carefully stretched on board frames to dry. After they had dried they were again scraped with sharp knives to secure an even thickness, and then rubbed smooth with pumice and chalk. When finished, the clean, shining, cream-colored skin was known as vellum,[2] or parchment.

[1] From *manu scriptum*, meaning written by hand.

[2] So expensive of time and effort was the production of books by this method

was next cut into pages of the desired size and arranged
r for writing. The larger pieces were used for large books,
as are shown in Plate 2, and the remnants to produce small
s. The inks, too, had to be prepared, and the pages ruled.
ıe main writing was done with black, but the page was fre-
tly bordered with red, gold, or some other bright color,
: many beautiful illustrations inserted by artistic monks.
:times an initial letter was
tifully embellished, as is
n in Figure 39; sometimes
:rations were introduced in
body of the page, of which
res 39 and 40 are types; and
:times a colored illustration
painted on a sheet of vellum
nserted in the book. Figure
:presents such an illustrated
in an old manuscript. Fi-
', when completed, the let-
l and illustrated parchment
:s were arranged in order,
d together with a deerskin
gskin string, bound together
een oaken boards and covered



FIG. 39. INITIAL LETTER FROM AN OLD MANUSCRIPT

This shows the beautiful work done by some of the nuns and monks in "illuminating" the books they copied. This was done in colors by a nun, who pictured her own work in this initial letter L.

pigskin, properly lettered in gold, fitted with metal corners
clasps (R. 57), as shown in Plate 2, and often chained to
bookrack in the library with heavy iron chains as well.
Figure 71 and Plate 2.) Still further to protect the volume
theft, an anathema against the thief was usually lettered
e volume (R. 58).

ch was the painfully slow method of producing and multi-
ıg books before the advent of printing, and in days when
in copying manuscripts was not particularly common, even
ıg the monks. It required from a few months to a year or
: to produce a few copies, depending on the size and nature
e work, whereas to-day, with printing-presses, five thousand

nany of the manuscripts now extant were written crosswise on sheets from the previous writing had been largely erased by chemical or mechanical . How many valuable ancient manuscripts were lost in this manner no one . Fortunately the practice was not common until after the thirteenth cen- when the rise of the universities and the spread of learning made new demands ns for writing purposes.

copies of such a book as this can be printed and bound in a few days.

The scriptorium. An important part of the material equipment of many monasteries, in consequence, came to be a *scriptorium*, or writing-room, where the copying of manuscripts could take place undisturbed. In some monasteries one general room was provided, though it was customary to have a number of small rooms at the side of the library. In the monastery shown in Figure 38, seven small rooms for this purpose are shown built out on one side of the library. Sometimes individual cells along a corridor were provided. The advantage of the single room in which a number of monks worked came when an edition of eight or ten copies of a book was to be prepared. One monk could then dictate, while eight or ten others carefully printed on the skins before them what was dictated by the reader.[1] Figure 40 shows a monk at work, though here he is copying from a book before him. After an edition of eight or ten copies of a book had been prepared and bound, the extra copies were sent to neighboring and sometimes distant monasteries, sometimes in exchange for other books, and sometimes as gifts to brothers who had longed to read the work



FIG. 40. A MONK IN A SCRIPTORIUM
(From an illuminated picture in a manuscript in the Royal Library at Brussels)
This picture shows the beautiful work done in "illuminating" manuscript books by mediæval writers. Each copy was a work of art. This represents a better type of *scriptorium* than is usually shown.

[1] That the printing was not always carefully done is shown by the constant need, throughout the Middle Ages, of correct copies for comparison. The following injunction of the Abbot Alcuin to the monks at Tours, given at the beginning of the ninth century, is illustrative of the need for care in copying:

"Here let the scribes sit who copy out the words of the Divine Law, and likewise the hallowed sayings of Holy Fathers. Let them beware of interspersing their own frivolities in the words they copy, nor let a trifler's hand make mistakes through haste. Let them earnestly seek out for themselves correctly written books to transcribe, that the flying pen may speed along the right path. Let them distinguish the proper sense by colons and commas, and set the points, each one in its due place, and let not him who reads the words to them either read falsely or pause suddenly. It is a noble work to write out holy books, nor shall the scribe fail of his due reward. Writing books is better than planting vines, for he who plants a vine serves his belly, but he who writes a book serves his soul."

(R. 55). New monasteries were provided with the beginnings of a library in this way, and churches were supplied with Missals, Psalters, and other books needed for their services.

The writing-room, or rooms, came to be a very important place in those monasteries noted for their literary activity. West gives an interesting description of the *scriptorium* at Tours, where the learned English monk, Alcuin, was Abbot from 796 to 804, and which at the time was the principal book-writing monastery in Frankland. Describing Alcuin's labors to secure books to send to other monasteries in Charlemagne's kingdom, he says:

> We can almost reconstruct the scene. In the intervals between the hours of prayer and the observance of the round of cloister life, come hours for the copying of books under the presiding genius of Alcuin. The young monks file into the *scriptorium*, and one of them is given the precious parchment volume containing a work of Bede or Isidore or Augustine, or else some portion of the Latin Scriptures, or even a heathen author. He reads slowly and clearly at a measured rate while all the others seated at their desks take down his words, and thus perhaps a score of copies are made at once. Alcuin's observant eye watches each in turn, and his correcting hand points out the mistakes in orthography and punctuation. The master of Charles the Great, in that true humility that is the charm of his whole behavior, makes himself the writing-master of his monks, stooping to the drudgery of faithfully and gently correcting their many puerile mistakes, and all for the love of studies and the love of Christ. Under such guidance, and deeply impressed by the fact that in the copying of a few books they were saving learning and knowledge from perishing, and thereby offering a service most acceptable to God, the copying in the *scriptorium* went on in sobriety from day to day. Thus were produced those improved copies of books which mark the beginning of a new age in the conserving and transmission of learning. Alcuin's anxiety in this regard was not undue, for the few monasteries where books could be accurately transcribed were as necessary for publication in that time as are the great publishing houses to-day.[1]

Monastic collections. Despite the important work done by a few of the monasteries in preserving and advancing learning, large collections of books were unknown before the Revival of Learning, in the fourteenth century. The process of book production in itself was very slow, and many of the volumes produced were later lost through fire, or pillage by new invaders. During the early days of wood construction a number of monastic and church libraries were burned by accident. In the pillaging of the Danes and Northmen on the coasts of England and northern France,

[1] West, A. F., *Alcuin*, pp. 72–73.



FIG. 41. CHARLEMAGNE'S EMPIRE, AND THE IMPORTANT MONASTERIES OF THE TIME

Charlemagne's empire at his death is shaded darker than other parts of the map

in the ninth and tenth centuries, a number of important monastic collections there were lost. In Italy the Lombards destroyed some collections in their sixth-century invasion, and the Saracens burned some in southern Italy in the ninth. Monte Cassino, among other monasteries, was destroyed by both the Lombards and the Saracens. From a number of extant catalogues of old monastic libraries we know that, even as late as the thirteenth and fourteenth centuries, a library of from two to three hundred volumes was large.[1] The catalogues show that most of these

[1] The largest monastic library on the Continent was Fulda, which specialized in the copying of manuscripts. In 1561 it had 774 volumes. In England the largest collections were at Canterbury, which in the fourteenth century possessed 698 volumes, and at Peterborough, which had 344 volumes at about the same time. The library of Croyland, also in England, burned in 1091, at that time contained approximately 700 volumes. These represented the largest collections in Europe.

were books of a religious nature, being monastic chronicles, manuals of devotion, comments on the Scriptures, lives of miracle-working saints, and books of a similar nature (**Rs. 55, 56**). A few were commentaries on the ancient learning, or mediæval text-books on the great subjects of study of the time (**R. 60**). A still smaller number were copies of old classical literary works, and of the utmost value (**R. 57**).

The convents and their schools. The early part of the Middle Ages also witnessed a remarkable development of convents for women, these receiving a special development in Germanic lands. Filled with the same aggressive spirit as the men, but softened somewhat by Christianity, many women of high station among the German tribes founded convents and developed institutions of much renown. This provided a rather superior class of women as organizers and directors, and a conventual life continued, throughout the entire Middle Ages, to attract an excellent class of women. This will be understood when it is remembered that a conventual life offered to women of intellectual ability and scholarly tastes the one opportunity for an education and a life of learning. The convents, too, were much earlier and much more extensively opened for instruction to those not intending to take the vows than was the case with the monasteries, and, in consequence, it became a common practice throughout the Middle Ages, just as it is to-day among Catholic families, to send girls to the convent for education and for training in manners and religion. Many well-trained women were produced in the convents of Europe in the period from the sixth to the thirteenth centuries.

The instruction consisted of reading, writing, and copying Latin, as in the monasteries, as well as music, weaving and spinning, and needlework. Weaving and spinning had an obvious utilitarian purpose, and needlework, in addition to necessary sewing, was especially useful in the production of altar-cloths and sacred vestments. The copying and illuminating of manuscripts, music, and embroidering made a special appeal to women (**R. 56**), and some of the most beautifully copied and illuminated manuscripts of the mediæval period are products of their skill.[1] Their contribution to music and art, as it influenced the life of the time,

[1] The *Hortus Delicarum* of the Abbess Herrard, of the convent of Hohenburg, in Alsace, was a famous illustration of artistic workmanship. This was an attempt to embody, in encyclopædic form, the knowledge of her time. The manuscript was embellished with hundreds of beautiful pictures, and was long preserved as a wonderful exhibition of mediæval skill. It was lost to civilization, along with many other treasures, when the Prussians bombarded Strassburg, in 1870.

was also large. The convent schools reached their highest development about the middle of the thirteenth century, after which they began to decline in importance.

Learning in Ireland and Britain. As was stated earlier in this chapter, the one part of western Europe where something of the old learning was retained during this period was in Ireland, and in those parts of England which had not been overrun by the Germanic tribes. Christian civilization and monastic life had been introduced into Ireland probably as early as 425 A.D., and probably by monastic missionaries from Lerins and Saint Victor (see Figure 41). Saint Patrick preached Christianity to the Irish, about 440 A.D., and during the fifth and sixth centuries churches and monasteries were founded in such numbers over Ireland that the land has been said to have been dotted all over with churches, monasteries, and schools. Saint Patrick had been educated in the old Roman schools, probably at Tours when it was still an important Roman provincial city. Other early missionaries had had similar training, and these, not sharing the antipathy to pagan learning of the early Italian church fathers, had carried Greek and Latin languages and learning to Ireland. Here it flourished so well, largely due to the island being spared from invasion, that Ireland remained a center for instruction in Greek long after it had virtually disappeared elsewhere in western Christendom. So much was this the case, says Sandys, in his *History of Classical Scholarship*, "that if any one knew Greek it was assumed that he must have come from Ireland."

In 565 A.D., Saint Columba, an eminent Irish scholar and religious leader, crossed over to what is now southwestern Scotland, founded there the monastery of Iona, and began the conversion of the Picts. Saint Augustine landed in Kent in 597, and had begun the conversion of the Angles and Saxons and Jutes who had settled in southeastern Britain, while shortly afterwards the Irish monks from Iona began the conversion of the people of the north of Britain. The monastery of Lindisfarne was founded about 635 A.D., and soon became an important center of religious and classical learning in the north. Irish and English monks also crossed in numbers to northern Frankland, and labored for the conversion of the Franks and Saxons.

In 664 A.D., at a council held at Whitby, the Irish Church in England and the Roman Church were united, and a great enthusiasm for religion and learning swept over the island. In 670,

Theodore of Tarsus and the Abbot Hadrian, whom Bede, the scholar and historian of the early English Church, describes as men "instructed in secular and divine literature both Greek and Latin" (R. 59 a), arrived in England from southern Italy and began their work of instructing pupils in Greek and Latin (R. 59 b). Both taught at Canterbury, and raised the cathedral school there to high rank. In 674 the monastery at Wearmouth was founded, and in 682 its companion Yarrow. These were endowed with books from Rome and Vienne, and soon became famous for the instruction they provided. It was at the twin monasteries of Wearmouth and Yarrow that the Venerable Bede (673–735), whose *Ecclesiastical History of England* gives us our chief picture of education in Britain in his time, was educated and remained as a lifelong student.[1] As a result of all these efforts a number of northern monasteries, as well as a few of the cathedral schools, early became famous for their libraries, scholars, and learning. This culture in Ireland and Britain was of a much higher standard than that obtaining on the Continent at the time, because the classical inheritance there had been less corrupted.

The cathedral school at York. One of the schools which early attained fame was the cathedral school at York, in northern England. This had, by the middle of the eighth century, come to possess for the time a large library, and contained most of the important Latin authors and textbooks then known (R. 61). In this school, under the *scholasticus* Ælbert, was trained a youth by the name of Alcuin, born in or near York, about 735 A.D. In a poem describing the school (R. 60), he gives a good portrayal of the instruction he received, telling how the learned Ælbert "moistened thirsty hearts with diverse streams of teaching and the varied dews of learning," and sorted out "youths of conspicuous intelligence" to whom he gave special attention. Alcuin afterward succeeded Ælbert as *scholasticus*, and was widely known as a gifted teacher. Well aware of the precarious condition of learning amid such a rude and uncouth society, he handed on to his pupils the learning he had received, and imbued them with

[1] He there "enjoyed advantages which could not perhaps have been found anywhere else in Europe at the time — perfect access to all the existing sources of learning in the West. Nowhere else could he acquire at once the Irish, the Roman, the Gallician, and the Canterbury learning; the accumulated stores of books which Benedict (founder and abbot) had bought at Rome and at Vienne; or the disciplinary instruction drawn from the monasteries on the Continent, as well as from Irish missionaries." (Bishop Stubbs, *Dictionary of Christian Biography*, article on Bede.)

something of his own love for it and his anxiety for its preservation and advancement. It was this Alcuin who was soon to give a new impetus to the development of schools and the preservation of learning in Frankland.

Charlemagne and Alcuin. In 768 there came to the throne as king of the great Frankish nation one of the most distinguished and capable rulers of all time — a man who would have been a commanding personality in any age or land. His ancestors had developed a great kingdom, and it was his grandfather who had defeated the Saracens at Tours (p. 113) and driven them back over the Pyrenees into Spain. This man Charlemagne easily stands out as one of the greatest figures of all history. For five hundred years before and after him there is no ruler who matched him in insight, force, or executive capacity. He is particularly the dominating figure of mediæval times. Born in an age of lawlessness and disorder, he used every effort to civilize and rule as intelligently as possible the great Frankish kingdom. Wars he waged to civilize and Christianize the Saxon tribes of northern Germany, to reduce the Lombards of northern Italy to order, and to extend the boundaries of the Frankish nation. At his death, in 814, his kingdom had succeeded to most of the western possessions of the old Roman Empire, including all of what to-day comprises France, Belgium, Holland, and Switzerland, large portions of what is now western Germany and northern Italy, and portions of northern Spain. (See Figure 41.)

Realizing better than did his bishops and abbots the need for educational facilities for the nobles and clergy, he early turned his attention to securing teachers capable of giving the needed instruction. These, though, were scarce and hard to obtain. After two unsuccessful efforts to obtain a master scholar to become, as it were, his minister of education, he finally succeeded in drawing to his court perhaps the greatest scholar and teacher in all England. At Parma, in northern Italy, Charlemagne met Alcuin, in 781, and invited him to leave York for Frankland. After obtaining the consent of his archbishop and king, Alcuin accepted, and arrived, with three assistants, at Charlemagne's court, in 782, to take up the work of educational propaganda in Frankland.

The plight in which he found learning was most deplorable, presenting a marked contrast to conditions in England. Learning had been almost obliterated during the two centuries of wild dis-



PLATE 1. THE CLOISTERS OF A MONASTERY, NEAR FLORENCE, ITALY

This monastery, La Certosa, located on a high hill and resembling a mediæval fortress as one approaches it, was founded in 1341 by a Florentine merchant. The picture shows the cloisters and interior court. Eighteen cells, two churches, and other rooms are entered from the cloisters. A few monks were still in residence there as late as 1905, one of whom is seen, but the monastery was then in process of being closed by the Italian Government.



PLATE 2. THE LIBRARY OF THE CHURCH OF SAINT WALLBERG, AT ZUTPHEN, HOLLAND

"Ponderous folios for Scholastics made"

This shows the large oak-bound and chained books, as well as a common type of bookrack used in churches and monasteries during the earlier period.



der from 600 on. From 600 to 850 has often been called the rkest period of the Dark Ages, and Alcuin arrived when Frank-nd was at its worst. The monastic and cathedral schools which ıd been established earlier had in large part been broken up, ıd the monasteries had become places for the pensioning of royal vorites and hence had lost their earlier religious zeal and effec-veness. The abbots and bishops possessed but little learning, ıd the lower clergy, recruited largely from bondmen, were grossly norant, greatly to the injury of the Church. The copying of ooks had almost ceased, and learning was slowly dying out.

The palace school There had for some time been a form of hool connected with the royal court, known as the *palace school*, ıough the study of letters had played but a small part in it. To ıe reorganization of this school Alcuin first addressed himself, troducing into it elementary instruction in that learning of hich he was so fond. The school included the princes and incesses of the royal household, relatives, attachés, courtiers, ıd, not least in importance as pupils, the king and queen. To eet the needs of such a heterogeneous circle was no easy task. The instruction which Alcuin provided for the younger embers of the circle was largely of the question and answer atechetical) type, both questions and answers being prepared y Alcuin beforehand and learned by the pupils. Fortunately amples of Alcuin's instruction have been preserved to us in dialogue prepared for the instruction of Pepin, a son of Charle-agne, then sixteen years old (R. 62). With the older mem-ers the questions and answers were oral. For all, though, the ıstruction was of a most elementary nature, ranging over the ements of the subjects of instruction of the time. Poetry, arith-ıetic, astronomy, the writings of the Fathers, and theology are ıentioned as having been studied. Charlemagne learned to read atin, but is said never to have mastered the art of writing. It as not an easy position for any one to fill. To quote from West's escription: [1]

> Charles wanted to know everything and to know it at once. His rong, uncurbed nature eagerly seized on learning, both as a delight r himself and a means of giving stability to his government, and so, hile he knew he must be docile, he was at the same time imperious. lcuin knew how to meet him, and at need could be either patiently ocular or grave and reproving. Thus, on one occasion when he had

[1] West, A. F., *Alcuin*, pp. 45–47.

been informed of the great learning of Augustine and Jerome, he impatiently demanded of Alcuin, "Why can I not have twelve clerks such as these?" Twelve Augustines and Jeromes! and to be made arise at the king's bidding! Alcuin was shocked. "What!" he discreetly rejoined, "the Lord of heaven and earth had but two such, and wouldst thou have twelve?" But his personal affection for the king was most unselfish, and he consequently took great delight in stimulating his desire for learning. . . .

He studied everything Alcuin set before him, but had special anxiety to learn all about the moon that was needed to calculate Easter. With such an eager and impatient pupil as Charles, the other scholars were soon inspired to beset Alcuin with endless puzzling questions, and there are not wanting evidences that some of them were disposed to levity and even carped at his teachings. But he was indefatigable, rising with the sun to prepare for teaching. In one of his poetical exercises he says of himself that "as soon as the ruddy charioteer of the dawn suffuses the liquid deep with the new light of day, the old man rubs the sleep of night from his eyes and leaps at once from his couch, running straightway into the fields of the ancients to pluck their flowers of correct speech and scatter them in sport before his boys."

Charlemagne's proclamations on education. After reorganizing the palace school, Alcuin and Charlemagne turned their attention to the improvement of education among the monks and clergy throughout the realm. The first important service was the preparation and sending out of a carefully collected and edited series of sermons to the churches containing, "in two volumes, lessons suitable for the whole year and for each separate festival, and free from error." These Charlemagne ordered used in the churches (**R. 63**). He also says, "we have striven with watchful zeal to advance the cause of learning, which has been almost forgotten by the negligence of our ancestors; and, by our example, also we invite those whom we can to master the study of the liberal arts," meaning thereby to incite the bishops and clergy to a study of the learning of the mediæval time. The volumes and letter were sent out in 786, four years after Alcuin's arrival at the court. Further to aid in the revival of learning, Charlemagne, in 787, imported a number of monks from Italy, who were capable of giving instruction in arithmetic, singing, and grammar, and sent them to the principal monasteries to teach.

In 787 the first general proclamation on education of the Middle Ages was issued (**R. 64 a**), and from it we can infer much as to the state of learning among the monks and clergy of the time. In this document the king gently reproves the abbots of his realm for their illiteracy, and exhorts them to the study of letters. The

signature is Charlemagne's, but the hand is Alcuin's. In it he tells the abbots, in commenting on the fact that they had sent letters to him telling him that "sacred and pious prayers" were being offered in his behalf, that he recognized in "most of these letters both correct thoughts and uncouth expressions; because what pious devotion dictated faithfully to the mind, the tongue, uneducated on account of the neglect of study, was not able to express in a letter without error." He therefore commands the abbots neither to neglect the study of letters, if they wish to have his favor, nor to fail to send copies of his letter "to all your suffragans and fellow bishops, and to all the monasteries." Two years later (789) Charlemagne supplemented this by a further general admonition (R. 64 b) to the ministers and clergy of his realm, exhorting them to live clean and just lives, and closing with:

> And let schools be established in which boys may learn to read. Correct carefully the Psalms, the signs in writing, the songs, the calendar, the grammar, in each monastery and bishopric, and the catholic book; because often some desire to pray to God properly, but they pray badly because of incorrect books.

In 802 he further commanded that "laymen shall learn thoroughly the Creed and the Lord's Prayer" (R. 64 c). Finally, in his enthusiasm for schools, Charlemagne went so far as to direct that "every one should send his son to school to study letters, and that the child should remain at school with all diligence until he should become well instructed in learning." Charlemagne, of course, was addressing freemen of the court and the official classes. That he ever meant to include the children of the laboring classes, or that the idea of compulsory education ever entered his head, may well be doubted.

Effect of the work of Charlemagne and Alcuin. The actual results of the work of Charlemagne and Alcuin were, after all, rather meager. The difficulties they faced are almost beyond our comprehension. Nobles and clergy were alike ignorant and uncouth. There seemed no place to begin. It may be said that by Charlemagne's work he greatly widened the area of civilization, created a new Frankish-Roman Empire to be the inheritor of the civilization and culture of the old one, checked the decline in learning and reawakened a desire for study, and that he began the substitution of ideas for might as a ruling force among the tribes under his rule. That for a time he gave an important impetus

Paris were laid siege to, and disorder reigned throughout northern Frankland. *The Annals of Xanten* and the *Annals of Saint Vaast*, two mediæval chronicles of importance, give gloomy pictures of this period. Three selections will illustrate:

> According to their custom the Northmen plundered East and West Frisia and burned . . . towns. . . . With their boats filled with immense booty, including both men and goods, they returned to their own country.[1]
>
> The Normans inflicted much harm in Frisia and about the Rhine. A mighty army of them collected by the river Elbe against the Saxons, and some of the Saxon towns were besieged, others burned, and most terribly did they oppress the Christians.[2]
>
> The Northmen ceased not to take Christian people captive and kill them, and to destroy churches and houses and burn villages. Through all the streets lay bodies of the clergy, of laymen, nobles, and others, of women, children, and suckling babes. There was no road or place where the dead did not lie, and all who saw Christian people slaughtered were filled with sorrow and despair.[3]

After much destruction, Rollo, Duke of the Normans, finally accepted Christianity, in 912, and agreed to settle down in what has ever since been known as *Normandy*. From here portions of the invaders afterward passed over to England in the Norman Conquest of 1066. This was the last of the great German tribes to move, and after they had raided and plundered and settled down and accepted Christianity, western Europe, after six centuries of bloodshed and pillage and turmoil and disorder, was at last ready to begin in earnest the building-up of a new civilization and the restoration of the old learning.

Work of Alfred in England. The set-back to learning caused by this latest deluge of barbarism was a serious one, and one from which the land did not recover for a long time. In northern Frankland and in England the results were disastrous. The revival which Charlemagne had started was checked, and England did not recover from the blow for centuries. Even in the parts of England not invaded and pillaged, education sadly declined as a result of nearly a century of struggle against the invaders (**R. 66**). Alfred, known to history as *Alfred the Great*, who ruled as English king from 871 to 901, made great efforts to revive learning in his kingdom. Probably inspired by the example of Charlemagne, he established a large palace school (**R. 68**), to the support of which he devoted one eighth of his income; he imported

[1] *Annals of Xanten*, 846 A.D. [2] *Ibid.*, 851 A.D. [3] *Annals of Saint Vaast*, 884 A.D.

scholars from Mercia and Frankland (R. 67); restored many monasteries; and tried hard to revive schools and encourage learning throughout his realm, and with some success.[1] With the great decay of the Latin learning he tried to encourage the use of the native Anglo-Saxon language,[2] and to this end translated books from Latin into Anglo-Saxon for his people. In his Introduction to Gregory's volume (R. 66) he expresses the hope, "If we have tranquillity enough, that all the free-born youth now in England, who are rich enough to be able to devote themselves to it . . . be set to learn . . . English writing," while those who were to continue study should then be taught Latin. The coming of the Normans in 1066, with the introduction of Norman-French as the official language of the court and government, for a time seriously interfered with the development of that native English learning of which Alfred wrote.

In the preceding chapter and in this one we have traced briefly the great invasions, or migrations, which took place in western Europe, and indicated somewhat the great destruction they wrought within the bounds of the old Empire. In this chapter we have traced the beginnings of Christian schools to replace the ones destroyed, the preservation of learning in the monasteries, and the efforts of Charlemagne and Alfred to revive learning in their kingdoms. In the chapter which follows we shall describe the mediæval system of education as it had evolved by the twelfth century, after which we shall be ready to pass to the beginnings of that Revival of Learning which ultimately resulted in the rediscovery of the learning of the ancient world.

QUESTIONS FOR DISCUSSION

1. Picture the gradual dying-out of Roman learning in the Western Empire, and explain why pagan schools and learning lingered longer in Britain, Ireland, and Italy than elsewhere.
2. At what time was the old Roman civilization and learning most nearly extinct?
3. Explain how the monasteries were forced to develop schools to maintain any intellectual life.
4. Explain how the copying of manuscripts led to further educational development in the monasteries.
5. Would the convents have tended to attract a higher quality of women than the monasteries did of men? Why?

[1] It is related that ignorant court officials, fearing the king's displeasure, sought to learn from their children.

[2] Through Alfred's efforts, the compilation of the *Anglo-Saxon Chronicle* was begun, that the people of England might be able to read the history of their country in their own language.

6. Explain why Greek was known longer in Ireland and Britain than elsewhere in the West.
7. What was the relative condition of learning in Frankland and England, about 900 A.D.?
8. What light is thrown on the conditions of the civilization of the time by the small permanent success of the efforts of Charlemagne, looking toward a revival of learning in Frankland?
9. Explain how Latin came naturally to be the language of the Church, and of scholarship in western Europe throughout all the Middle Ages.
10. After reading the story of the migrations, and of the fight to save some vestiges of the old civilization, try to picture what would have been the result had Rome not built up an Empire, and had Christianity not arisen and conquered.

SELECTED READINGS

In the accompanying *Book of Readings* the following selections are reproduced:

53. Migne: Forms used in connection with monastery life:
- (*a*) Form for offering a Child to a Monastery.
- (*b*) The Monastic Vow.
- (*c*) Letter of Honorable Dismissal from a Monastery.

54. Abbot Heriman: The Copying of Books at a Monastery.
55. Othlonus: Work of a Monk in writing and copying Books.
56. A Monk: Work of a Nun in copying Books.
57. Symonds: Scarcity and Cost of Books.
58. Clark: Anathemas to protect Books from Theft.
59. Bede: On Education in Early England.
- (*a*) The Learning of Theodore.
- (*b*) Theodore's Work for the English Churches.
- (*c*) How Albinus succeeded Abbot Hadrian.

60. Alcuin: Description of the School at York.
61. Alcuin: Catalogue of the Cathedral Library at York.
62. Alcuin: Specimens of the Palace School Instruction.
63. Charlemagne: Letter sending out a Collection of Sermons.
64. Charlemagne: General Proclamations as to Education.
- (*a*) The Proclamation of 787 A.D.
- (*b*) General Admonition of 789 A.D.
- (*c*) Order as to Learning of 802 A.D.

65. Alcuin: Letter to Charlemagne as to Books and Learning.
66. King Alfred: State of Learning in England in his Time.
67. Asser: Alfred obtains Scholars from Abroad.
68. Asser: Education of the Son of King Alfred.
69. Ninth-Century Plan of the Monastery at Saint Gall.

QUESTIONS ON THE READINGS

1. Point out the similarity between:
 (*a*) The form for offering a child to a monastery and the monastic vow (**53 a-b**), and a modern court form for renouncing or adopting a child.
 (*b*) The letter of dismissal from a monastery (**53 c**), and the modern letter of honorable dismissal of a student from a college or normal school.

2. Compare the type of books copied by the Abbot of Saint Martins (55) and those copied by the nun at Wessebrunn (56).
3. Was the evolution of the school-teacher out of the copyist at Ratisbon (55), by a specialization of labor, analogous to the process in more modern times?
4. Explain the mediæval belief in the effectiveness to protect books from theft of such anathemas as are reproduced in 58.
5. What do the selections from Bede (59 a-c) indicate as to the preservation of the old learning in the cities of southern Italy? What as to the condition of learning and teaching in England in Bede's day?
6. What is the status of education indicated by the selections from Alcuin, on the cathedral school at York (60) and the palace school instruction of Pepin (62)?
7. What was the condition of learning among the higher clergy and monks as shown by Charlemagne's proclamations (64)?
8. What was the extent of the destruction wrought by the Danes in England, as indicated by King Alfred's Introduction to Pope Gregory's *Pastoral Care* (66), and his efforts to obtain scholars from abroad (67)?
9. What was the character of the education King Alfred provided for his son (68)?
10. Study out the plan of the monastery of Saint Gall (69), and enumerate the various activities of such a center.

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CHAPTER VII

EDUCATION DURING THE EARLY MIDDLE AGES

II. SCHOOLS ESTABLISHED AND INSTRUCTION PROVIDED

1. *Elementary instruction and schools*

Monastic and conventual schools. In the preceding chapters we found that, by the tenth century, the monasteries had developed both inner monastic schools for those intending to take the vows (*oblati*), and outer monastic schools for those not so intending (*externi*). The distinction in name was due to the fact that the *oblati* were from the first considered as belonging to the brotherhood, participating in the religious services and helping the monks at their work. The others were not so admitted, and in all monasteries of any size a separate building, outside the main portion of the monastery (see Figure 38), was provided for the



FIG. 43. AN OUTER MONASTIC SCHOOL
(After an old wood engraving)

outer school. A similar classification of instruction had been evolved for the convents.

The instruction in the inner school was meager, and in the outer school probably even more so. Reading, writing, music, simple reckoning, religious observances, and rules of conduct constituted the range of instruction. Reading was taught by the alphabet method, as among the Romans, and writing by the

use of wax tablets and the stylus. Much attention was given to Latin pronunciation, as had been the practice at Rome. As Latin by this time had practically ceased to be a living tongue, outside the Church and perhaps in Central Italy, the difficulties of instruction were largely increased. The Psalter, or book of Latin psalms, was the first reading book, and this was memorized rather than read. Copy-books, usually wax, with copies expressing some scriptural injunction, were used. Music, being of so much importance in the church services, received much time and attention. In arithmetic, counting and finger reckoning, after the Roman plan, was taught. Latin was used in conversation as much as possible, some of the old lesson books much resembling conversation books of to-day in the modern languages (R. 75). Special attention seems to have been given to teaching rules of conduct to the *oblati*,[1] and much corporal punishment was used to facilitate learning. Up to the eleventh century this instruction, meager as it was, constituted the whole of the preparatory training necessary for the study of theology and a career in the Church. In the convents similar schools were developed, though, as stated in the last chapter, much more attention was given to the education of those not intending to take the vows.

Song and parish schools. In the cathedral churches, and other larger non-cathedral churches, the musical part of the service was very important, and to secure boys for the choir and for other church services these churches organized what came to be known as *song schools* (R. 70). In these a number of promising boys were trained in the same studies and in much the same way as were boys in the monastery schools, except that much more attention was given to the musical instruction. The students in these schools were placed under the *precentor* (choir director) of the cathedral, or other large church, the *scholasticus* confining his attention to the higher or more literary instruction provided. The boys usually were given board, lodging, and instruction in return for their services as choristers. As the parish churches in the diocese also came to need boys for their services, parish schools of a similar nature were in time organized in connection

[1] Anderson tells of a monastic student's notebook on conduct which has been preserved, and which "prescribes that the young man is to kneel when answering the Abbot, not to take a seat unasked, not to loll against the wall, nor fidget with things within reach. He is not to scratch himself, nor cross his legs like a tailor. He is to wash his hands before meals, keep his knife sharp and clean, not to seize upon vegetables, and not to use his spoon in the common dish."

with them. It was out of this need, and by a very slow and gradual evolution, that the parish school in western Europe was developed later on.

Chantry schools. Still another type of elementary school, which did not arise until near the latter part of the period under consideration in this chapter, but which will be enumerated here as descriptive of a type which later became very common, came through wills, and the schools came to be known as *chantry schools*, or *stipendary schools*. Men, in dying, who felt themselves particularly in need of assistance for their misdeeds on earth, would leave a sum of money to a church to endow a priest, or sometimes two, who were to chant masses each day for the repose of their souls. Sometimes the property was left to endow a priest to say mass in honor of some special saint, and frequently of the Virgin Mary. As such priests usually felt the need for some other occupation, some of them began voluntarily to teach the elements of religion and learning to selected boys, and in time it became common for those leaving money for the prayers to stipulate in the will that the priest should also teach a school. Usually a very elementary type of school was provided, where the children were taught to know the Lord's Prayer, the Creed, the Salutation to the Virgin, certain psalms, to sign themselves rightly with the sign of the cross, and perhaps to read and write (Latin). Sometimes, on the contrary, and especially was this the case later on in England, a grammar school was ordered maintained. After the twelfth century this type of foundation (**R. 73**) became quite common.

2. *Advanced instruction*

Cathedral and higher monastic schools. As the song schools developed the cathedral schools were of course freed from the necessity of teaching reading and writing, and could then develop more advanced instruction. This they did, as did many of the monasteries, and to these advanced schools those who felt the need for more training went. As grammar was, throughout all the early part of the Middle Ages, the first and most important subject of instruction, the advanced schools came to be known as *grammar schools*, as well as cathedral or episcopal schools (**R. 72**). The cathedral churches and monasteries of England and France early became celebrated for the high character of their instruction (**R. 71**) and the type of scholars they produced. All

these schools, though, suffered a serious set-back during the period of the Danish and Norman invasions, many being totally destroyed.

On the continent, due to the greater deluge of barbarism and the more unsettled condition of society, more difficulty was experienced in getting cathedral schools established, as the following decree of the Lateran Church Council of 826 indicates:

> Complaints have been made that in some places no masters nor endowment for a grammar school is found. Therefore all bishops shall bestow all care and diligence, both for their subjects and for other places in which it shall be found necessary, to establish masters and teachers who shall assiduously teach grammar schools and the principles of the liberal arts, because in these chiefly the commandments of God are manifest and declared.

These two types of advanced schools — the cathedral or episcopal and the monastic — formed what might be called the secondary-school system of the early Middle Ages (**Rs. 70, 71**). They were for at least six hundred years the only advanced teaching institutions in western Europe, and out of one or the other of these two types of advanced schools came practically all those who attained to leadership in the service of the Church in either of its two great branches. Still more, out of the impetus given to advanced study by the more important of these schools, the universities of a later period developed; and numerous private gifts of lands and money were made to establish grammar schools to supplement the work done by the cathedral and other large church schools.

The Seven Liberal Arts. The advanced studies which were offered in the more important monastery and cathedral schools comprised what came to be known as *The Seven Liberal Arts* [1] of the Middle Ages. The knowledge contained in these studies, taught as the advanced instruction of the period, represents the amount of secular learning which was intentionally preserved by the Church from neglect and destruction during the period of the barbarian deluges and the reconstruction of society.

These Seven Liberal Arts were comprised of two divisions, known as:

I. THE TRIVIUM: (1) Grammar; (2) Rhetoric; (3) Dialectic (Logic).
II. THE QUADRIVIUM: (4) Arithmetic; (5) Geometry; (6) Astronomy; (7) Music.

[1] This expression came into common use in the fifth century, when the Christian writers summarized the ancient learning under these seven headings or studies, following earlier Greek and Roman classifications. (See p. 70).

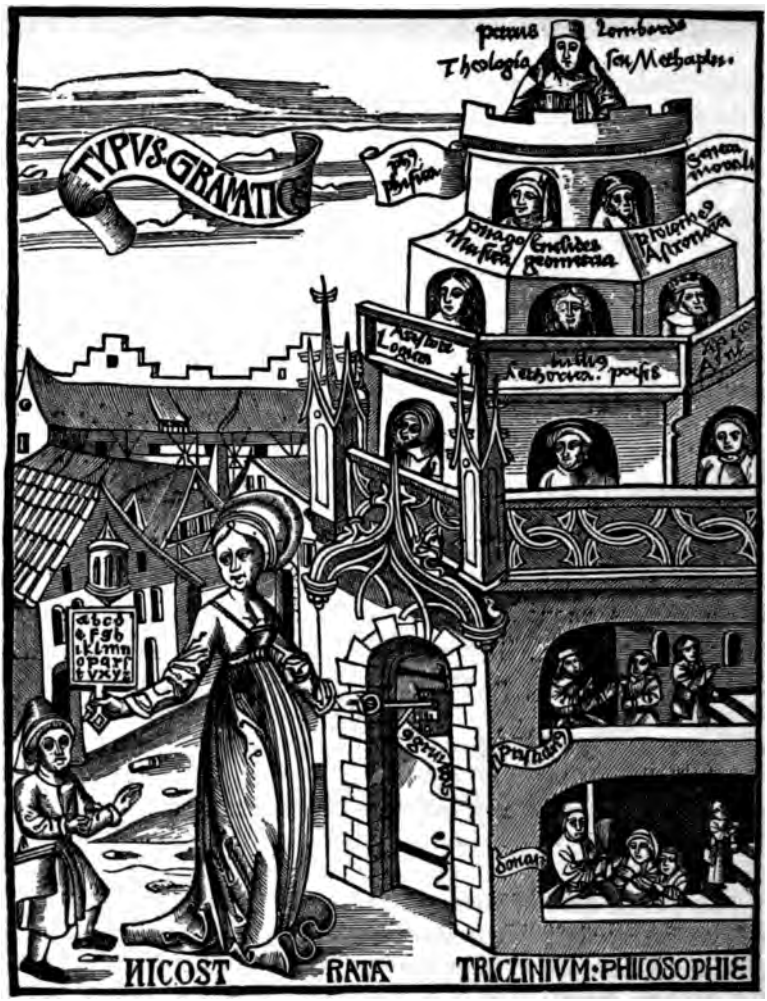


FIG. 44. THE MEDIÆVAL SYSTEM OF EDUCATION SUMMARIZED

Allegorical representation of the progress and degrees of education, from an illuminated picture in the 1508 (Basel) edition of the *Margarita Philosophica* of Gregory de Reisch.

The youth, having mastered the Hornbook (ABC's) and the rudiments of learning (reading, writing, and the beginnings of music and numbers), advances toward the temple of knowledge. Wisdom is about to place the key in the lock of the door of the temple. On the door is written the word *congruitas*, signifying Grammar. ("Gramaire first hath for to teche to speke upon congruite.") On the first and second floors of the temple he studies the Grammar of Donatus, and of Priscian, and at the first stage at the left on the third floor he studies the Logic of Aristotle, followed by the Rhetoric and Poetry of Tully, thus completing the *Trivium*. The Arithmetic of Boethius also appears on the third floor. On the fourth floor he completes the studies of the *Quadrivium*, taking in order the Music of Pythagoras, Euclid's Geometry, [illegible] Ptolemy's Astronomy. The student now advances to the study of Philosophy, [illegible] Physics, Seneca's Morals, and the Theology (or Metaphysics) [illegible] last being the goal toward which all has been directed.

Beyond these came Ethics or Metaphysics, and the greatest of all studies, Theology. This last represented the one professional study of the early middle-age period, and was the goal toward which all the preceding studies had tended. This mediæval system of education is well summarized in the drawing given on the opposite page, taken from an illuminated picture inserted in a famous mediæval manuscript, recopied at Basle, Switzerland, in 1508.

Not all these studies were taught in every monastery or cathedral school. Many of the lesser monasteries and schools offered instruction chiefly in grammar, and only a little of the studies beyond. Others emphasized the Trivium, and taught perhaps only a little of the second group. Only a few taught the full range of mediæval learning, and these were regarded as the great schools of the times (R. 71).

Rhabanus Maurus (776–865), one of the greatest minds of the Middle Ages, Abbot for years at Fulda, and a mediæval textbook writer of importance, has left us a good description of each of the Seven Liberal Arts studies as they were developed in his day, and their use in the Christian scheme of education (R. 74).

I. THE TRIVIUM

Of the three studies forming the *Trivium*, grammar always came first as the basal subject. No uniformity existed for the other two.

1. Grammar. The foundation and source of all the Liberal Arts was grammar, it being, according to Maurus, "the science which teaches us to explain the poets and historians, and the art which qualifies us to speak and write correctly" (R. 74 a). In the introduction to an improved Latin grammar,[1] published about 1119, grammar is defined as "The doorkeeper of all the other sciences, the apt expurgatrix of the stammering tongue, the servant of logic, the mistress of rhetoric, the interpreter of theology, the relief of medicine, and the praiseworthy foundation of the whole quadrivium." Figure 45, from one of the earliest books printed in English, also emphasizes the great importance of grammar with the words: ' Wythout whiche science (s)ycherly alle other sciences in especial ben of lytyl recomme(d)." In addition to grammar in the sense we know the study to-day,

[1] The *Doctrinale*, by Alexander de Villa Die. This was in rhyme, and became immensely popular. It was the favorite text until the fifteenth century.

grammar in the old Roman and mediæval mind also included much of what we know as the analytical side of the study of literature, such as comparison, analysis, versification, prosody, word



FIG. 45. A SCHOOL: A LESSON IN GRAMMAR

(After a woodcut printed by Caxton in *The Mirror of the World*, 1481 (?). From Blades' *Life and Typography of William Caxton*, II, Plate LVI)
This is a good example of early English printing. Can you read it? This "Old English," like the German type (see Fig. 26), shows the change in Latin letters which came about with the copying of manuscripts during the Middle Ages. After the invention of printing the English soon returned to the Latin forms; the Germans are only now doing so.

formations, figures of speech, and vocal expression (R. 76). These were considered necessary to enable one to read understandingly the Holy Scriptures, and hence, "though the art be secular," says Maurus, "it has nothing unworthy about it."

The leading textbook was that of Donatus,[1] written in the fourth century, and Donatus (*donat*) and grammar came to be

[1] Donatus begins as follows:

"How many parts of speech are there?"	"Eight."
"What are they?"	"Noun, pronoun, verb, adverb, participle, conjunction, preposition, and interjection."
"What is a noun?"	"A part of speech with case, signifying a body or thing particularly or commonly."
"How many attributes have nouns?"	"Six."
"What are they?"	"Quality, comparison, gender, number, figure, case."

Etc., etc.

synonymous terms. The text by Priscian,[1] written in the sixth century, was also extensively used. The treatment in each was catechetical in form; that is, questions and answers, which were learned. The text was of course in Latin, and the teacher usually had the only copy, so that the pupils had to learn from memory or copy from dictation. The cost of writing-material usually precluded the latter method. After sufficient ability in grammar had been attained, simple reading exercises or colloquies (**R. 75**), usually of a religious or moralizing nature, were introduced, though where permitted the Latin authors, especially Vergil,[2] were read. At Saint Gall, in Switzerland, and at some other places, many Latin authors were read; at Tours, on the other hand, we find the learned Abbot Alcuin saying to the monks: "The sacred poets are sufficient for you; there is no reason why you should sully your mind with the rank luxuriance of Vergil's verse."

2. Rhetoric. Rhetoric, as defined by Maurus, was "the art of using secular discourse effectively in the circumstances of daily life," and enabling the preacher or missionary to put the divine message in eloquent and impressive language (**R. 74 b**). Much of the old Roman rhetoric had been taken over by grammar, but in its place was added a certain amount of letter and legal documentary writing. The priest, it must be remembered, became the secretary and lawyer of the Middle Ages, as well as the priest, and upon him devolved the preparation of most of the legal papers of the time, such as wills, deeds, proclamations, and other formal documents. Accordingly the art of letter-writing [3] and the prepa-

[1] The following from Priscian, reproduced by Graves, illustrates the method of instruction as applied to the first book of the *Æneid* of Vergil.

"What part of speech is *arma?*"	"A noun."
"Of what sort?"	"Common."
"Of what class?"	"Abstract."
"Of what gender?"	"Neuter."
"Why neuter?"	"Because all nouns whose plurals end in *a* are neuter."
"Why is not the singular used?"	"Because this noun expresses many different things."

Etc., etc.

This form of textbook writing was common, not only during the Middle Ages, but well into modern times. The famous *New England Primer* was in part in this form, and many early American textbooks in history and geography were written after this plan.

[2] Vergil, due to his beautiful poetic form and to his love of nature and life, was especially guarded against during the early Middle Ages as the most seductive of the ancient Latin writers. It is not at all inappropriate that, in Dante's *Inferno*, Vergil should have been the person to guide Dante through hell and purgatory, but should not have been allowed to accompany him into paradise.

[3] Textbooks on the art of letter-writing began to appear by the eleventh century, explaining in detail how to prepare the five divisions of a letter: (1) the salutation

ration of legal documents were made a part of the study of rhetoric, and some study of both the civil ("worldly") and canon (church) law was gradually introduced.

3. **Dialectic.** Dialectic, or logic, says Maurus, is the science of understanding, and hence the science of sciences (R. 74 c). By means of its aid one was enabled to unmask falsehood, expose error, formulate argument, and draw conclusions accurately. The study was one of preparation for ethics and theology later on. Extracts from the works of Aristotle, prepared by Boethius, and later his complete works, constituted the texts used. While grammar was the great subject of the seven during all the early Middle Ages, dialectic later came to take its place. After the rise of the universities and the organization of schools of theology, with theology more of a rational science and less a matter of dogma, dialectic came to hold first place in importance as a preparation for the disputations of the later Middle Ages. Theological questions formed the practical exercises, and the schools doing most in dialectic attracted many students because of this.

These three studies, constituting the *Trivium*, based as they were directly on the old Roman learning and schools, contained more that was within the teaching knowledge of the time than did the subjects of the *Quadrivium*, and also subject-matter which was much more in demand.

II. THE QUADRIVIUM

The *trivial* studies, in most cases before the thirteenth century, sufficed to prepare for the study of theology, though those few who desired to prepare thoroughly also studied the subjects of the *quadrivium*. In schools not offering instruction in this advanced group some of the elements of its four studies were often taught from the textbooks in use for the *Trivium*. Particularly was this the case during the early Middle Ages, when the knowledge of arithmetic, geometry, and astronomy possessed by western Europe was exceedingly small. No regular order in the study of the subjects of this group was followed.

4. **Arithmetic.** Naturally little could be done in this subject as long as the Roman system of notation was in use (see footnote, 1, p. 64), and the Arabic notation was not known in western Christian Europe until the beginning of the thirteenth century,

(*salutatio*), (2) the art of introducing the subject properly and making a good impression (*captatio benevolentiæ*), (3) the body of the letter (*narratio*), (4) how to make the request (*petitio*), and (5) a fitting conclusion (*conclusio*).

and was not much used for two or three centuries later. So far as arithmetic was taught before that time, it was but little in advance of that given to novitiates in the monasteries, except that much attention was devoted to an absurd study of the properties of numbers,[1] and to the uses of arithmetic in determining church days, calculating the date of Easter, and interpreting passages in the Scriptures involving measurements (R. 74 d). The textbook by Rhabanus Maurus *On Reckoning*, issued in 820, is largely in dialogue (catechetical) form, and is devoted to describing the properties of numbers, "odd, even, perfect, imperfect, composite, plane, solid, cardinal, ordinal, adverbial, distributive, multiple, denunciative, etc."; to pointing out the scriptural significance of number; [2] and to an elaborate explanation of finger reckoning, after the old Roman plan (see p. 65). Near the end of the tenth century Gerbert,[3] afterwards Pope Sylvester II, devised a simple abacus-form for expressing numbers, simple enough in itself, but regarded as wonderful in its day. This greatly simplified calculation, and made work with large numbers possible. He also devised an easier form for large divisions.

[1] Anderson reproduces a portion of a chapter by Capella on the number four, which is illustrative of the mediæval study of the properties of number:

"What shall I call four? in which is a certain perfection of solidarity; for it is composed of length and depth, and a full decade is made up from those four numbers added together in order, that is, from one, two, three, four. Similarly a hundred is made up of the four decades, that is, ten, twenty, thirty, forty, which are a hundred; and again four numbers from a hundred on amount to a thousand, that is, 100, 200, 300, 400. So ten thousand is made up of another series. What is to be said of the fact that there are four seasons of the year, four quarters of the heavens, and four principles of the elements? There are also four ages of man, four vices, and four virtues."

[2] Anderson reproduces a paragraph from Maurus, showing how number was applied to Holy Writ. It reads:

"A real thinker," says Maurus, "will not pass on indifferently when he reads that Moses, Elijah, and our Lord fasted forty days. Without strict observance and investigation the matter cannot be explained. The number 40 contains the number 10 four times, by which all is signified which concerns the temporal. For, according to the number 4, the days and the seasons run their course. The day consists of morning, midday, evening, and night, the year of spring, summer, autumn, winter. Further, we have the number 10 to recognize God and the creature. The three (trinity) indicated the Creator; the seven, the creature which consists of body and spirit. In the latter is the three: for we must love God with our whole heart and soul and mind. In the body, on the other hand, the four elements of which it consists reveal themselves clearly. So if we are moved through that which is signified by the number 10 to live in time — for 10 is taken four times — chaste, withholding ourselves from worldly lusts, that means to fast forty days. So the Holy Scriptures contain suggestively in many different numbers all sorts of secrets which must remain hidden to those who do not understand the meaning of numbers."

[3] Gerbert (953–1003) was one of the most learned monks of his day, having studied in the Saracen schools of Spain. He afterwards became Pope Sylvester II (999–1003). Because of his scientific knowledge in an age of superstition he was accused of transactions with the devil.

Gerbert's form for expressing numbers may be shown from the following simple sum in addition:

Arabic Form	*Roman Form*	*Gerbert's Form*			
		M	*C*	*X*	*I*
1204	MCCIV	I	II		IV
538	DXXXVIII		V	III	VIII
2455	MMCCCCLV	II	IV	V	V
619	DCXIX		VI	I	IX
4816	MMMMDCCCXVI	IV	VIII	I	VI

No study of arithmetic of importance was possible, however, until the introduction of Arabic notation and the use of the zero.

5. Geometry. This study consisted almost entirely of geography and reasoning as to geometrical forms until the tenth century, when Boethius' work on *Geometry*, containing some extracts from Euclid, was discovered by Gerbert. The geography of Europe, Asia, and Africa also was studied, as treated in the textbooks of the time, and a little about plants and animals as well was introduced. The nature of the geographic instruction may be inferred from Figure 46, which reproduces one of the best world maps of the day. The main geographical features of the known world can be made out from this, but many of the mediæval maps are utterly unintelligible.

To illustrate the reasoning as to geometrical forms which preceded the finding of Euclid we quote from Maurus, who says that the science of geometry "found realization also at the building of the tabernacle and the temple; and that the same measuring rod, circles, spheres, hemispheres, quadrangles, and other figures were employed. The knowledge of all this brings to him, who is occupied with it, no small gain for his spiritual culture.' (**R. 74 e**). After Gerbert's time some geometry proper and the elements of land surveying were introduced. The real study of geometry in Europe, however, dates from the twelfth century, when Euclid was translated into Latin from the Arabic.

6. Astronomy. In astronomy the chief purpose of the instruction was to explain the seasons and the motions of the planets, to set forth the wonders of the visible creation, and to enable the priests "to fix the time of Easter and all other festivals and holy days, and to announce to the congregation the proper celebration of them" (**R. 74 g**).

Even after Ptolemy's *Mechanism of the Heavens* (p. 49) and Aristotle's *On the Heavens* had filtered across the Pyrenees from

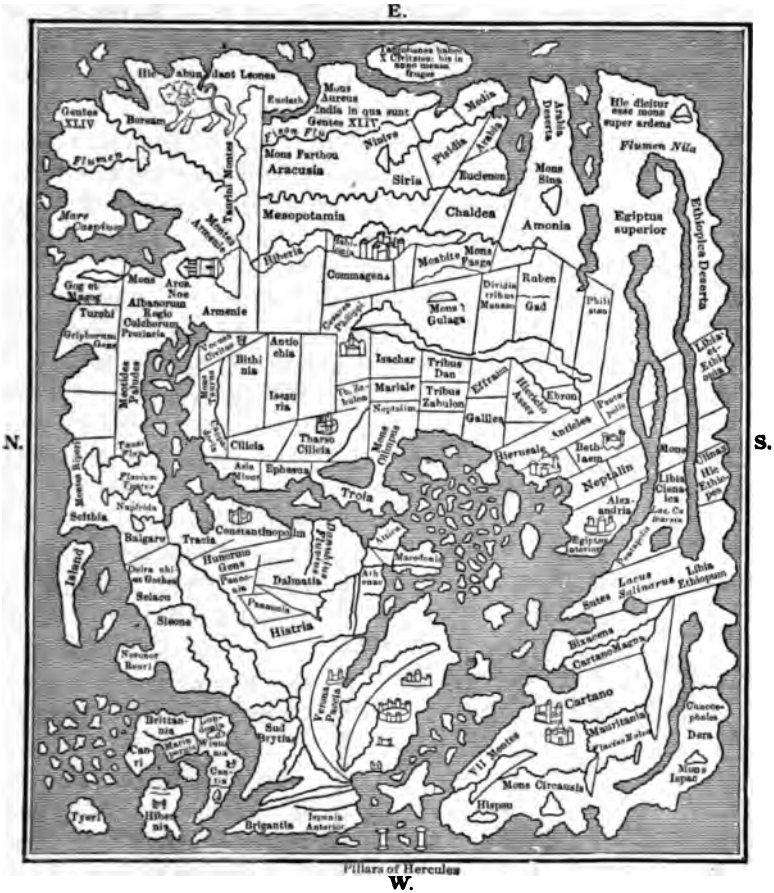


FIG. 46. AN ANGLO-SAXON MAP OF THE WORLD

(From a tenth-century map in the British Museum)

This is one of the better maps of the period. Note the mixture of Biblical and classical geography (Bethlehem, Jerusalem, Pillars of Hercules), and the animal life (lion) introduced in the upper corner. The Mediterranean Sea in the center, the Greek islands, the British isles, the Italian peninsula, the Nile, and the northern African coast are easily recognized. Western Europe, the best-known part of the world at that time, is very poorly done.

the Saracens, in the eleventh century, the Ptolemaic theory of a flat earth located at the center of the heavenly bodies and around which they all revolved, while a very pleasing theological conception, was absolutely fatal to any instruction in astronomy worth while and to any astronomical advance. All mediæval astronomy, too, was saturated with astrology, as the selection on

motion of the heavenly bodies reproduced from Bartholomew Anglicus shows (R. 77 b), and the supernatural was invoked to explain such phenomena as meteors, comets, and eclipses. The Copernican theory of the motion of the heavenly bodies was not published until 1543, and all our modern ideas date from that time.

Physics was often taught as a part of the instruction in astronomy, and consisted of lessons on the properties of matter (R. 77 a) and some of the simple principles of dynamics. Little else of what we to-day know as physics was then known.

7. **Music.** Unlike the other studies of the *Quadrivium*, the instruction in music was quite extensive, and from early times a good course in musical theory was taught (R. 74 f). Boethius' *De Musica*, written at the beginning of the sixth century, was the text used. Music entered into so many activities of the Church that much naturally was made of it. The organ, too, is an old instrument, going back to the second century B.C., and the organ with a keyboard to the close of the eleventh century. This instrument added much to the value of the music course, and the hymns composed by Christian musicians form an important part of our musical heritage.[1] The cathedral school at Metz and the monastery at Saint Gall became famous as musical centers, and of the work of one of the teachers of music at Saint Gall (Notker) it was written by his biographer: "Through different hymns, sequences, tropes, and litanies, through different songs and melodies as well as through ecclesiastical science, the pupils of this man made the church of God famous not merely in Alemannia, but everywhere from sea to sea."



FIG. 47. AN EARLY CHURCH MUSICIAN
(From a fourteenth-century manuscript, now in the British Museum)

The great textbooks of the Middle Ages. While the textbooks mentioned under the description of each of the Liberal Arts formed the basis of the instruction given, most of the instruction

[1] For example, the *Stabat Mater* and the *Dies Iræ*, two thirteenth-century hymns. The former has been called the most pathetic and the latter the most sublime of all mediæval poems.

before the twelfth century was not given from editions of the original works, but from abridged compendiums. Six of these were so famous and so widely used that each deserves a few words of description.

1. *The Marriage of Mercury and Philology*, written by Martianus Capella, between 410 and 427 A.D., was the first of the five great mediæval textbooks. Mercury, desiring to marry, finally settles on the learned maiden Philology, and the seven bridesmaids — Grammar, Dialectic, Rhetoric, Geometry, Arithmetic, Astronomy, and Music — enter in turn at the ceremony and tell who they are and what they represent. The speeches of the seven maidens summarized the ancient learning in each subject. This textbook was more widely used during the Middle Ages than any other book.

2. *Boethius* (475–524) was another important mediæval textbook writer, having prepared textbooks on dialectic, arithmetic, geometry, music, and ethics. Nearly all of what the Middle Ages knew of Aristotle's *Logic* and *Ethics*, and of the writings of Plato, were contained in the texts he wrote. His *De Musica* was used in the universities as a textbook until near the middle of the eighteenth century.

3. *Cassiodorus*[1] (c. 490–585), in his *On the Liberal Arts and Sciences*, prepared a digest of each of the Seven Liberal Arts for monastic use, fixing the number at seven by scriptural authority.[2]

4. *Isidore*, Bishop of Seville (c. 570–636), under the title of *Etymologies* or *Origines*, prepared an encyclopædia of the ancient learning for the use of the monks and clergy which was intended to be a summary of all knowledge worth knowing. While he drew his knowledge from the writings of the Greeks and Romans, with many of which he was familiar, contrary to the attitude of Cassiodorus he forbade the monks and clergy to make any use of them whatever. Cassiodorus was still in part a Roman; Isidore was a full mediæval.

5. *Alcuin*, a learned scholar of the eighth century, whom we met in the preceding chapter (p. 140), wrote treatises on the

[1] Cassiodorus was an educated later-Roman, who had been chief minister to Theodoric, the Ostrogothic king, and had done much to carry over Latin learning and civilization into the new régime. He later founded the monastery of Viviers, in southern Italy, and spent the latter part of his life there in writing and contemplation. He urged the monks to study, and those who had no head for learning he advised to read Cato and Columella on agriculture, and then to devote themselves to it.

[2] "Wisdom hath builded her house; she hath hewn out her seven pillars." (Proverbs, IX, 1.)

studies of the *Trivium* and on astronomy which were used in many schools in Frankland.

6. *Maurus.* In 819 the learned monk of Fulda, Rhabanus Maurus, a pupil of Alcuin, issued his volume *On the Instruction of the Clergy*, in the third part of which he describes the uses and the subject-matter of each of the Arts (**R. 74**). He also wrote texts on grammar and astronomy, and in 844 issued an encyclopædia, *De Universo*, based largely on the work of Isidore, but supplemented from other sources.

These were the great textbooks for the study of the *Trivium* and the *Quadrivium* throughout all the early Middle Ages. Considering that they were in manuscript form and were in one volume,[1] their extent and scope can be imagined. The teacher usually had or had access to a copy, though even a teacher's books in that day were few in number (**R. 78**). Pupils had no books at all. These "great" texts were composed of brief extracts, bits of miscellaneous information, and lists of names. Their style was uninviting. They were at best a mere shell, compared with the Greek and Roman knowledge which had been lost. Some of these books were in question-and-answer (catechetical) form. Their purpose was not to stimulate thinking, but to transmit that modicum of secular knowledge needed for the service of the Church and as a preparation for the study of the theological writings. For nearly eight hundred years education was static, the only purpose of instruction being to transmit to the next generation what the preceding one had known. For such a period such textbooks answered the purpose fairly well.

3. *Training of the nobility*

Tenth-century conditions. Following the death of Charlemagne and the break-up of the empire held together by him, a period of organized anarchy followed in western Europe. Author-

[1] Abelson, in his monograph on *The Seven Liberal Arts*, reduces each of these textbooks to their equivalent in a modern 16mo printed page, with the following results:

Subject	*Capella* (c. 425)	*Boethius* (c. 520)	*Cassiodorus* (c. 575)	*Isidore* (c. 630)	*Alcuin* (c. 800)	*Maurus* (c. 844)
Grammar	11	—	25	50	54	55
Rhetoric	14	—	5½	14	26	—
Dialectic	11	—	18	14	25	—
Arithmetic	11	40	2	2	—	—
Geometry	15	30	2	1	—	—
Astronomy	9	—	15	3	23	60
Music	11	67	2	12	—	—
Totals in pages	82	137	69½	96	128	115

ity broke down more completely than before, and Europe, for protection, was forced to organize itself into a great number of small defensive groups. Serfs,[1] freemen lacking land, and small landowners alike came to depend on some nobleman for protection, and this nobleman in turn upon some lord or overlord. For this protection military service was rendered in return. The lord lived in his castle, and the peasantry worked his land and supported him, fighting his battles if the need arose. This condition of society was known as *feudalism*, and the feudal relations of lord and vassal came to be the prevailing governmental organization of the period. Feudalism was at best an organized anarchy, suited to rude and barbarous times, but so well was it adapted to existing conditions that it became the prevailing form of government, and continued as such until a better order of society could be evolved. With the invention of gunpowder, the rise of cities and industries, the evolution of modern States by the consolidation of numbers of these feudal governments, and the establishment of order and civilization, feudalism passed out with the passing of the conditions which gave rise to it. From the end of the ninth to the middle of the thirteenth centuries it was the dominant form of government.

The life of the nobility under the feudal régime gave a certain picturesqueness to what was otherwise an age of lawlessness and disorder. The chief occupation of a noble was fighting, either in his own quarrel or that of his overlord. It is hard for us to-day to realize how much fighting went on then. Much was said about "honor," but quarrels were easily started, and oaths were poorly kept. It was a day of personal feuds and private warfare, and every noble thought it his right to wage war on his neighbor at any time, without asking the consent of any one.[2] As a preparation for actual warfare a series of mimic encounters, known as *tournaments*, were held, in which it often happened that knights were killed. In these encounters mounted knights charged one another with spear and lance, performing feats similar to those

[1] The mediæval serf was the successor of the Roman slave, and was a step upward in the process of the evolution of the free man. The serf was tied to the soil and by obligations of personal service to the lord. Gradually, due to economic causes, the personal service was changed from general to definite service, and finally to a fixed rental sum. When a fixed money payment took the place of personal service the free man had been evolved. This took place rapidly with the rise of cities and industry toward the latter part of the Middle Ages.

[2] The German private duel and the American fist fight are the modern survivals of the time when personal insults, easily taken, and private grievances were settled in the "noble way" by sword and battle-axe and torch.

of actual warfare. This was the great amusement of the period, compared with which the German duel, the Mexican bullfight, or the American game of football are mild sports. The other diversions of the knights and nobles were hunting, hawking, feasting, drinking, making love, minstrelsy, and chess. Intellectual ability formed no part of their accomplishments, and a knowledge of reading and writing was commonly regarded as effeminate.

To take this carousing, fighting, pillaging, ravaging, destructive, and murderous instinct, so strong by nature among the Germanic tribes, and refine it and in time use it to some better purpose, and in so doing to increasingly civilize these Germanic lords and overlords, was the problem which faced the Church and all interested in establishing an orderly society in Europe. As a means of checking this outlawry the Church established and tried to enforce the "Truce of God" (**R. 79**), and as a partial means of educating the nobility to some better conception of a purpose in life the Church aided in the development of the education of chivalry, the first secular form of education in western Europe since the days of Rome, and added its sanction to it after it arose.

The education of chivalry. This form of education was an evolution. It began during the latter part of the ninth century and the early part of the tenth, reached its maximum greatness during the period of the Crusades (twelfth century), and passed out of existence by the sixteenth. The period of the Crusades was the heroic age of chivalry. The system of education which gradually developed for the children of the nobility may be briefly described as follows:

1. *Page.* Up to the age of seven or eight the youth was trained at home, by his mother. He played to develop strength, was taught the meaning of obedience, trained in politeness and courtesy, and his religious education was begun. After this, usually at seven, he was sent to the court of some other noble, usually his father's superior in the feudal scale, though in case of kings and feudal lords of large importance the children remained at home and were trained in the palace school. From seven to fourteen the boy was known as a *page.* He was in particular attached to some lady, who supervised his education in religion, music, courtesy, gallantry, the etiquette of love and honor, and taught him to play chess and other games. He was usually taught to read

and write the vernacular language, and was sometimes given a little instruction in reading Latin.[1] To the lord he rendered much personal service such as messenger, servant at meals, and attention to guests. By the men he was trained in running, boxing, wrestling, riding, swimming, and the use of light weapons.

2. *Squire.* At fourteen or fifteen he became a squire. While continuing to serve his lady, with whom he was still in company, and continuing to render personal service in the castle, the squire became in particular the personal servant and bodyguard of the lord or knight. He was in a sense a *valet* for him, making his bed, caring for his clothes, helping him to dress, and looking after him at night and when sick. He also groomed his horse, looked after his weapons, and attended and protected him on the field of combat or in battle. He himself learned to hunt, to handle shield and spear, to ride in armor, to meet his opponent, and to fight with sword and battle-axe. As he approached the age of twenty-one, he chose his lady-love, who was older than he and who might be married, to whom he swore ever to be devoted, even though he married some one else. He also learned to rhyme,[2] to make songs, sing, dance, play the harp, and observe the ceremonials of the Church. Girls were given this instruction along with the boys, but naturally their training placed its emphasis upon household duties, service, good manners, conversational ability, music, and religion.

3. *Knight.* At twenty-one the boy was knighted, and of this the Church made an impressive ceremonial. After fasting, confession, a night of vigil in armor spent at the altar in holy meditation, and communion in the morning, the ceremony of dubbing the squire a knight took place in the presence of the court. He gave his sword to the priest, who blest it upon the altar. He then

[1] In the earlier days of noblemen's education reading and writing were regarded as effeminate, but in the later times the nobles became increasingly literate. By the fifteenth and sixteenth centuries many began to pride themselves on their patronage of learning.

[2] Rhyming in the vernacular language came to be an important part of the training, and many old love songs and songs expressing the joy of life date from this period. Chaucer's knight is described as:

"Syngynge he was or floytynge [playing], al the day;
He was as fressh as is the monthe of May.
Short was his gowne, with sleves longe and wyde.
Wel cowde he sitte on hors and faire ryde;
He cowde songes make and wel endite,
Juste and eek daunce, and wel purtreye and write.
So hote he loved, that by nighterdale [night time]
He slept no more than doth the nightingale."

took the oath "to defend the Church, to attack the wicked, to respect the priesthood, to protect women and the poor, to preserve the country in tranquillity, and to shed his blood, even to its last drop, in behalf of his brethren." The priest then returned him the sword which he had blessed, charging him "to protect the widows and orphans, to restore and preserve the desolate, to revenge the wronged, and to confirm the virtuous." He then knelt before his lord, who, drawing his own sword and holding it over him, said: "In the name of God, of our Lady, of thy patron Saint, and of Saint Michael and Saint George, I dub thee knight; be brave (touching him with the sword on one shoulder), be bold (on the other shoulder), be loyal (on the head)."



FIG. 48. A SQUIRE BEING KNIGHTED
(From an old manuscript)

The chivalric ideals. Such, briefly stated, was the education of chivalry. The cathedral and monastery schools not meeting the needs of the nobility, the castle school was evolved. There was little that was intellectual about the training given — few books, and no training in Latin. Instead, the native language was emphasized, and squires in England frequently learned to speak French. It was essentially an education for secular ends, and prepared not only for active participation in the feuds and warfare of the time, but also for the Seven Perfections of the Middle Ages: (1) Riding, (2) Swimming, (3) Archery, (4) Fencing, (5) Hunting, (6) Whist or Chess, and (7) Rhyming. It also represents the first type of schooling in the Middle Ages designed to prepare for life here, rather than hereafter. For the nobility it was a discipline, just as the Seven Liberal Arts was a discipline for the monks and clergy. Out of it later on was evolved the education of a gentleman as distinct from that of a scholar.

That such training had a civilizing effect on the nobility of the

time cannot be doubted. Through it the Church exercised a restraining and civilizing influence on a rude, quarrelsome, and impetuous people, who resented restraints and who had no use for intellectual discipline. It developed the ability to work together for common ends, personal loyalty, and a sense of honor in an age when these were much-needed traits, and the ideal of a life of regulated service in place of one of lawless gratification was set up. What monasticism had done for the religious life in dignifying labor and service, chivalry did for secular life. The Ten Commandments of chivalry, (1) to pray, (2) to avoid sin, (3) to defend the Church, (4) to protect widows and orphans, (5) to travel, (6) to wage loyal war, (7) to fight for his Lady, (8) to defend the right, (9) to love his God, and (10) to listen to good and true men, while not often followed, were valuable precepts to uphold in that age and time. In the great Crusades movement of the twelfth century the Church consecrated the military prowess and restless energy of the nobility to her service, but after this wave had passed chivalry became formal and stilted and rapidly declined in importance (**R. 80**).



FIG. 49.
A KNIGHT OF THE TIME OF THE FIRST CRUSADE
(From a manuscript in the British Museum)

4. *Professional study*

As the one professional study of the entire early Middle-Age period, and the one study which absorbed the intellectual energy of the one learned class, the evolution of the study of Theology possesses particular interest for us.

The study of Theology. During the earlier part of the period under consideration the preparatory study necessary for service in the Church was small, and very elementary in character. The elements of reading, writing, reckoning, and music, as taught to *oblati* in the monasteries, sufficed. As knowledge increased a little the study of grammar at first, and later all the studies of the *Trivium* came to be common as preparatory study, while those who made the best preparation added the subjects of the *Quadrivium*. Ethics, or metaphysics, taught largely from the digest of Aristotle's *Ethics* prepared in the sixth century by

Boethius, was the text for this study until about 1200, when Aristotle's *Metaphysics*, *Physics*, *Psychology*, and *Ethics* were reintroduced into Europe from Saracen sources (R. 87).

The theological course proper experienced a similar development. At first, as we saw in chapter V, there were but few principles of belief, and the church organization was exceedingly simple. In 325 A.D. the Nicene Creed was formulated (p. 96), and the first twenty canons (rules) adopted for the government of the clergy. With the translation of the Bible into the Latin language (*Vulgate*, fourth century), the writings of the early Latin Fathers, and additional canons and expressions of belief adopted at subsequent church councils, an increasing amount relating to belief, church organization, and pastoral duties needed to be imparted to new members of the clergy. Still, up to the eleventh century at least, the theological course remained quite meager. In a tenth-century account the following description of the theological course of the time is given: [1]

1. Elements of grammar and the first part of Donatus.
2. Repeated readings of the Old and New Testaments.
3. Mass prayers.
4. Rules of the Church as to time reckoning.
5. Decrees of the Church Councils.
6. Rules of penance.
7. Prescriptions for church services.
8. Worldly laws.
9. Collections of homilies (sermons).
10. Tractates on the Epistles and Gospels.
11. Lives of the Saints.
12. Church music.

It will be seen from this tenth-century course of theological study that it was based on reading, writing, and reckoning, and a little music as preparatory studies; that it began with the first of the subjects of the *Trivium*, which was studied only in part; and that its purpose was to impart needed information as to dogma, church practices, canon (church) law, and such civil (worldly) law as would be needed by the priest in discharging his functions as the notary and lawyer of the age. There is no suggestion of the study of Theology as a science, based on evidences, logic, and ethics. Such study was not then known, and would not have been tolerated. There were no other professions to study for.

[1] From the life of the Frankish Abbot, John of Gorze, Abbot at Gorze in the tenth century.

Systematic instruction begins. About 1145 Peter the Lombard published his *Book of Sentences*, and this worked a revolution in the teaching of the subject. In topics, arrangement, and method of treatment the book marked a great advance, and became the standard textbook in Theology for a long time. It did much to change the study of Theology from dogmas to a scientific subject, and made possible schools of Theology in the universities now about to arise. In the thirteenth century it was made the official textbook at both the universities of Oxford and Paris. The studies of dialectic and ethics were raised to a new plane of importance by the publication of this book.

By the close of the twelfth century the interest of the Church in a better-trained clergy had grown to such an extent that theological instruction was ordered established wherever there was an Archbishop. In a decree issued by Pope Innocent III and the General Council it was ordered:

> In every cathedral or other church of sufficient means, a master ought to be elected by the prelate or chapter, and the income of a prebend assigned to him, and in every metropolitan church a theologian also ought to be elected. And if the church is not rich enough to provide a grammarian and a theologian, it shall provide for the theologian from the revenues of his church, and cause provision to be made for the grammarian in some church of his city or diocese.[1]

We also, in the early thirteenth century, find bishops enforcing theological training on future priests by orders of which the following is a type:

> Hugh of Scawby, clerk, presented by Nigel Costentin to the church of (Potter) Hanworth, was admitted and canonically instituted in it as parson, on condition that he comes to the next orders to be ordained subdeacon. But on account of the insufficiency of his grammar, the lord bishop ordered him on pain of loss of his benefice to attend school. And the Dean of Wyville was ordered to induct him into corporal possession of the said church in form aforesaid, and to inform the lord bishop if he does not attend school.[2]

5. *Characteristics of mediæval education*

Foundations laid for a new order. The education which we have just described covers the period from the time of the downfall of Rome to the twelfth or the thirteenth century. It represents what the Church evolved to replace that which it and the

[1] Leach, A. F., *Educational Charters*, p. 143.
[2] *Ibid.*, p. 147.

barbarians had destroyed. Meager as it still was, after seven or eight centuries of effort, it nevertheless presents certain clearly marked lines of development. The beginnings of a new Christian civilization among the tribes which had invaded and overrun the old Roman Empire are evident, and, toward the latter part of the Middle Ages, we note the development of a number of centers of learning (**R. 71**) and the beginnings of that specialization of knowledge (church doctrine, classical learning, music, logic and ethics, theology), at different church and monastery schools, which promised much for the future of learning. We also notice, and will see the same evidence in the following chapter, the beginnings of a class of scholarly men, though the scholarship is very limited in scope and along lines thoroughly approved by the Church.

In education proper, in the sense that we understand it, the schools provided were still for a very limited class, and secondary rather than elementary in nature. They were intended to meet the needs of an institution rather than of a people, and to prepare those who studied in them for service to that institution. That institution, too, had concentrated its efforts on preparing its members for life in another world, and not for life or service in this. There were as yet no independent schools or scholars, the monks and clergy represented the one learned class, Theology was the one professional study, the ability to read and write was not regarded by noble or commoner as of any particular importance, and all book knowledge was in a language which the people did not understand when they heard it and could not read. Society was as yet composed of three classes — feudal warriors, who spent their time in amusements or fighting, and who had evolved a form of knightly training for their children; privileged priests and monks and nuns, who controlled all book learning and opportunities for professional advancement; and the great mass of working peasants, engaged chiefly in agriculture, and belonging to and helping to fight the battles of their protecting lord.

For these peasants there was as yet no education aside from what the Church gave through her watchful oversight and her religious services (**R. 81**), and but little leisure, freedom, wealth, security, or economic need to make such education possible or desirable. Moreover, the other-worldly attitude of the Church made such education seem unnecessary. It was still the education of a few for institutional purposes, though here and there, by the close of the twelfth century, the Church was beginning to

urge its members to provide some education for their children (R. 82), and the world was at last getting ready for the evolution of the independent scholar, and soon would be ready for the evolution of schools to meet secular needs.

Repressive attitude of the mediæval Church. The great work of the Church during this period, as we see it to-day, was to assimilate and sufficiently civilize the barbarians to make possible a new civilization, based on knowledge and reason rather than force. To this end the Church had interposed her authority against barbarian force, and had slowly won the contest. Almost of necessity the Church had been compelled to insist upon her way, and this type of absolutism in church government had been extended to most other matters. The Bible, or rather the interpretations of it which church councils, popes, bishops, and theological writers had made, became authoritative, and disobedience or doubt became sinful in the eyes of the Church.[1] The Scriptures were made the authority for everything, and interpretations the most fantastic were made of scriptural verses. Unquestioning belief was extended to many other matters, with the result that tales the most wonderful were recounted and believed. To question, to doubt, to disbelieve — these were among the deadly sins of the early Middle Ages. This attitude of mind undoubtedly had its value in assimilating and civilizing the barbarians, and probably was a necessity at the time, but it was bad for the future of the Church as an institution, and utterly opposed to scientific inquiry and intellectual progress. Monroe well expresses the situation which came to exist when he says:

> The validity of any statement, the actuality of any alleged instance, came to be determined, not by any application of rationalistic principle, not by inherent plausibility, not by actual inquiry into the facts of the case, but by its agreement with religious feelings or beliefs, its effect in furthering the influence of the Church or the reputation of a saint — in general, by its relationship to matters of faith. Thus it happens that the chronicles of the monks and the lives of the saints, charming and interesting as they are in their naïveté, their simplicity, their trustful credulity, and their pictures of a life and an attitude of mind

[1] Anselm (1033–1109), Archbishop of Canterbury from 1093 to 1109, formulated the early mediæval view when he said:

"I do not seek to know in order that I may believe, but I believe in order that I may know."

"The Christian ought to advance to knowledge through faith, not to come to faith through knowledge."

"The proper order demands that we believe the deep things of Christian faith before we presume to reason about them."

so remote from ours, are filled with incidents given as facts that test the greatest faith, strain the most vivid imagination, and shock that innate respect for reality, that it is the purpose of modern education to inculcate.[1]

This authoritative and repressive attitude of the Church expressed itself in many ways. The teaching of the period is an excellent example of this influence. The instruction in the so-called Seven Liberal Arts remained unchanged throughout a period of half a dozen centuries — so much accumulated knowledge passed on as a legacy to succeeding generations. It represented mere instruction; not education. As a recent writer has well expressed it, the whole knowledge and culture contained in the Seven Liberal Arts remained "like a substance in suspension in a medium incapable of absorbing it; unchanged throughout the whole mediæval period." Inquiry or doubt in religious matters was not tolerated, and scientific inquiry and investigation ceased to exist. The notable scientific advances of the Greeks, their literature and philosophy, and particularly their genius for free inquiry and investigation, no longer influenced a world dominated by an institution preparing its children only for life in a world to come. Not until the world could shake off this mediæval attitude toward scientific inquiry and make possible honest doubt was any real intellectual progress possible. In a rough, general way the turn in the tide came about the beginning of the twelfth century, and for the next five centuries the Church was increasingly busy trying, like King Canute of old, to stop the waves of free inquiry and scientific doubt from rising higher against the bulwarks it had erected.

The mediæval educational system. The educational system which the Church had developed by 1200 continued unchanged in its essential features until after the great awakening known as the Revival of Learning, or Renaissance. This system we have just sketched. For instruction in the elements of learning we have the inner and outer monastery and convent schools, and, in connection with the churches, song schools, and chantry or stipendary schools. In these last we have the beginnings of the parish school for instruction in the elements of learning and the fundamentals of faith for the children of the faithful. In the monasteries, convents, and in connection with the cathedral churches we have the secondary instruction fairly well organized

[1] Monroe, Paul, *Text-Book in the History of Education*, p. 258.

with the *Trivium* and the *Quadrivium* as the basis. At the close of the period under consideration in this chapter a few privately endowed grammar schools were just beginning to be founded to supplement the work of the cathedral schools (**Rs. 141-143**). In some of the inner monastery schools and a few of the cathedral

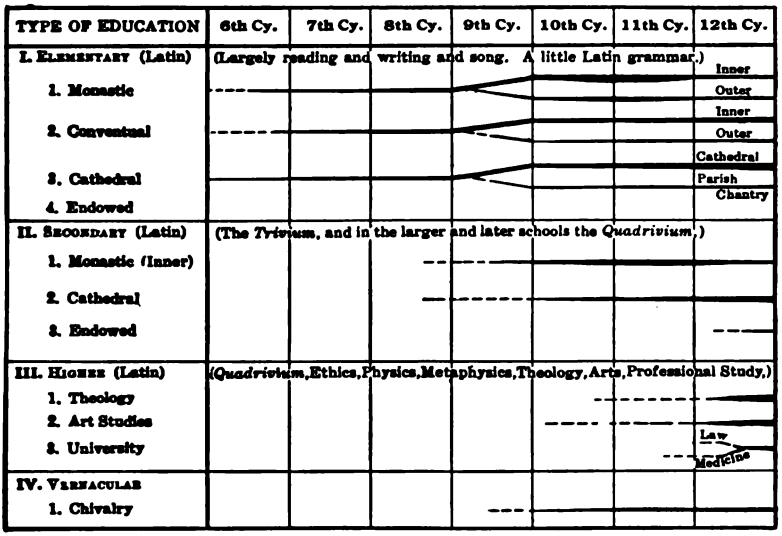


FIG. 50. EVOLUTION OF EDUCATION DURING THE EARLY MIDDLE AGES

The relative weight of the lines indicates approximate development. The lines along which educational evolution took place in the later Middle Ages are here clearly marked out.

schools we also have the beginnings of higher instruction, with theology as the one professional subject and the one learned career.

All these schools, too, were completely under the control of the Church. There were no private schools or teachers before about 1200. Only the chivalric education was under the control of princes or kings, and even this the Church kept under its supervision. The Church was still the State, to a large degree, and the Church, unlike Greece or Rome, took the education of the young upon itself as one of its most important functions. The schools taught what the Church approved, and the instruction was for religious and church ends. The monks who gave instruction in the monasteries were responsible to the Abbot, who was in turn responsible to the head of the order and through him to the Pope at Rome. Similarly the *scholasticus* in the cathedral school and

the *precentor* in the song school were both responsible to the Bishop, and again through Archbishop and Cardinal to the Pope.

The first teacher's certificates and school supervision. Toward the latter part of the period under consideration in this chapter an interesting development in church school administration took place. As the cathedral and song schools increased assistant teachers were needed, and the *scholasticus* and *precentor* gradually withdrew from instruction and became the supervisors of instruction, or rather the principals of their respective schools. As song or parish schools were established in the parishes of the diocese teachers for these were needed, and the *scholasticus* and *precentor* extended their authority and supervision over these, just as the Bishop had done much earlier (p. 97) over the training and appointment of priests. By 1150 we have, clearly evolved, the system of central supervision of the training of all teachers in the diocese through the issuing, for the first time in Europe, of licenses to teach (**R. 83**). The system was finally put into legal form by a decree adopted by a general council of the Church at Rome, in 1179, which required that the *scholasticus* "should have authority to superintend all the schoolmasters of the diocese and grant them licenses without which none should presume to teach," and that "nothing be exacted for licenses to teach" issued by him, thus stopping the charging of fees for their issuance. The *precentor*, in a similar manner, claimed and often secured supervision of all elementary, and especially all song-school instruction. Teachers were also required to take an oath of fealty and obedience (**R. 84 b**).

As a result of centuries of evolution we thus find, by 1200, a limited but powerful church school system, with centralized control and supervision of instruction, diocesan licenses to teach, and a curriculum adapted to the needs of the institution in control of the schools. We also note the beginnings of secular instruction in the training of the nobility for life's service, though even this is approved and sanctioned by the Church. The centralized religious control thus established continued until the nineteenth century, and still exists to a more or less important degree in the school systems of Italy, the old Austro-Hungarian States, Germany, England, and some other western nations. As we shall see later on, one of the big battles in the process of developing state school systems has come through the attempt of the State to substitute its own organization for this religious monopoly of instruction.

QUESTIONS FOR DISCUSSION

1. Outline the instruction in an inner monastery school.
2. Show how the mediæval parish school naturally developed as an offshoot of the cathedral schools, and was supplemented later by the endowed chantry schools.
3. What effect did the development of song-school instruction have on the instruction in the cathedral schools?
4. Why was it difficult to develop good cathedral schools during the early Middle Ages?
5. About how much training would be represented to-day by the Seven Liberal Arts, (*a*) assuming the body of knowledge then known? (*b*) assuming the body of knowledge for each subject known to-day?
6. What great subject of study has been developed out of one part of the study of mediæval rhetoric?
7. Why would dialectic naturally not be of much importance, so long as instruction in theology was dogmatic and not a matter of thinking?
8. Characterize the instruction in arithmetic, geometry, and geography during the early Middle Ages. Would we consider such knowledge as of any value? Explain the attention given to such instruction.
9. What great modern subjects of study have been developed out of the mediæval subjects of arithmetic, geometry, and astronomy?
10. Compare the knowledge of mediævals and moderns in (*a*) geography, (*b*) astronomy.
11. What does the fact that the few great textbooks were in use for so many centuries indicate as to the character of educational progress during the Middle Ages?
12. Was the Church wise in adopting and sanctifying the education of chivalry? Why?
13. What important contributions to world progress came out of chivalric education?
14. What ideals and practices from chivalry have been retained and are still in use to-day? Does the Boy Scouts movement embody any of the chivalric ideas and training?
15. Compare the education of the body by the Greeks and under chivalry.
16. Compare the Athenian ephebic oath with the vows of chivalry.
17. Picture the present world transferred back to a time when theology was the one profession.
18. What educational theory, conscious or unconscious, formed the basis for mediæval education and instruction?
19. Explain why the Church, after six or seven centuries of effort, still provided schools only for preparation for its own service.
20. What does the lack of independent scholars during the Middle Ages indicate as to possible leisure?
21. Was the attitude of Anselm a perfectly natural one for the Middle Ages? Can progress be made with such an attitude dominant?
22. Contrast the deadly sins of the Middle Ages with present-day conceptions as to education.
23. Contrast the purposes of mediæval education and the education of to-day.
24. When Greece and Rome offered no precedents, how did the Church come to so fully develop and control the education which was provided?
25. Compare the supervisory work of a modern county superintendent with that of a *scholasticus* of a mediæval cathedral.

SELECTED READINGS

In the accompanying *Book of Readings* the following selections are reproduced:

70. Leach: Song and Grammar Schools in England.
71. Mullinger: The Episcopal and Monastic Schools.
72. Statutes: The School at Salisbury Cathedral.
73. Aldwincle: Foundation Grant for a Chantry School.
74. Maurus: The Seven Liberal Arts.
75. Leach: A Mediæval Latin Colloquy.
76. Quintilian: On the Importance of the Study of Grammar.
77. Anglicus: The Elements, and the Planets.
(*a*) Of the Elements.
(*b*) Of Double Moving of the Planets.
78. Cott: A Tenth Century Schoolmaster's Books.
79. Archbishop of Cologne: The Truce of God.
80. Gautier: How the Church used Chivalry.
81. Draper: Educational Influences of the Church Services.
82. Winchester Diocesan Council: How the Church urged that the Elements of Religious Education be given.
83. Lincoln Cathedral: Licenses required to teach Song.
84. English Forms: Appointment and Oath of a Grammar-School Master.
(*a*) Northallerton: Appointment of a master of Song and Grammar.
(*b*) Archdeacon of Ely: Oath of a Grammar-School Master to.

QUESTIONS ON THE READINGS

1. Distinguish between song and grammar schools (**70**), and state what was taught in each. Do we have any modern analogy to the same teacher teaching both schools, as was sometimes done?
2. Distinguish between monastic and episcopal (cathedral) schools (**71**). When was the great era of each? How do you explain the change in relative importance of the two?
3. Explain the process of evolution of a parish school out of a chantry school.
4. What was the nature of the cathedral school at Salisbury (**72**)?
5. What type of a school was provided for in the Aldwincle chantry (**73**)? Why was it not until after the twelfth century that the endowing of schools (**73**) began to supersede the endowing of priests, churches, and monasteries?
6. How do you explain the need for so many years to master the Seven Liberal Arts (**74**)?
7. Into what subjects of study have we broken up the old subject of grammar, as described by Quintilian (**76**), and how have we distributed them throughout our school system? Is technical grammar at present taught in the best possible place?
8. What stage in scientific knowledge do the selections from Anglicus (**77 a-b**) indicate? What rate of scientific progress is indicated by its translation and length of use?
9. What scope of knowledge is represented in the library (**78**) of the tenth-century schoolmaster? What does the list indicate as to the state of learning of the time?
10. Picture the manners and morals of a time which called for the proclamation of a Truce of God (**79**). Would the rate of progress of civilization

and the rate of elimination of warfare up to then, and since, indicate that the Church has been very successful in imposing its will?

11. Show how Chivalry was made a great asset to the Church (**80**).
12. How do you explain the much greater simplicity of the church service of modern Protestant churches than that of the Roman (**81**) or Greek Catholic churches?
13. Explain the form of mild compulsion toward learning which the diocesan council of Winchester (**82**) attempted to institute.
14. Is the modern state teacher's certificate a natural outgrowth of the mediæval licenses (**83**) to teach grammar and song? Why did the Church insist on these when Rome had not required such?
15. Show how the modern oath of office of a teacher, and the possibility of dismissal for insubordination, is a natural development from the oath of fealty and obedience (**84 b**) of the mediæval teacher? Is this true also for our modern notices of appointment (**84 a**)?

SUPPLEMENTARY REFERENCES

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CHAPTER VIII

INFLUENCES TENDING TOWARD A REVIVAL OF LEARNING

I. MOSLEM LEARNING FROM SPAIN

The Mohammedans in Spain. It will be recalled that in chapter V we mentioned briefly the Mohammedan migrations of the seventh century, and said that we should meet them again a little later on as one of the minor forces in the development of our western civilization. After their defeat at Tours (732) the Mohammedans retired into Spain, mixed with the Iberian-Roman-Visigothic peoples inhabiting the peninsula, and began to develop a civilization there. Figure 33 (p. 114) shows how much of the world the Mohammedans had overrun by 800 A.D., and how much of Spain was in their possession.

In Spain they developed a skillful agriculture (**R. 85**), as, in lands as hot and dry as Spain, all agriculture to be successful must be. They introduced irrigation, gave special attention to the breeding of horses and cattle, and developed garden and orchard fruits. To them western Europe is indebted for the introduction of many of its orchard fruits, useful plants, and garden vegetables, as well as for a number of important manufacturing processes. The orange, lemon, peach, apricot, and mulberry trees; the spinach, artichoke, and asparagus among vegetables; cotton, rice, sugar cane, and hemp among useful plants; the culture of the silkworm, and the manufacture of silk and cotton garments; the manufacture of paper from cotton, and the making of morocco leather — these are among our debts to these people. Though many of the above had been known to antiquity, they had been lost during the barbarian invasions and were restored only through their re-introduction by the Moslems

Great absorptive power for learning. The original Arabians themselves were not a well-educated people. Before the time of Mohammed we have practically no records as to any education among them. When in their religious conquests they overran Syria (see Map, p. 103), they came in contact with the survivals of that wonderful Greek civilization and learning, and this they absorbed with greatest avidity.

It will be recalled, too, that in chapter IV (p. 94), it was stated that the early Christians developed very important catechetical schools in Egypt and Syria, and especially at Alexandria, Antioch, Edessa, Nisibis, Harran, and Cæsarea.[1] (See Figure 27, p. 89.) It was also stated that the Christian instruction imparted at these eastern schools was tinctured through and through with Greek learning and Greek philosophic thought. Here monasteries also were developed in numbers, and Syrian monks had for centuries been busy translating Greek authors into Syriac. It was also stated (p. 94) that the Eastern or Greek division of the Christian Church, of which Constantinople became the central city, was more liberal toward Greek learning than was the Western or Latin division of the Church.

By the fifth century, though, due in part to the breakdown of government, the increasing barbarity of the age, and the greater control of all thinking by the Church, the Eastern Church lost somewhat of its earlier tolerance. In 431 the Church Council of Ephesus put a ban on the Hellenized form of Christian theology advocated by Nestorius, then Patriarch of Constantinople, and drove him and his followers, known as *Nestorian Christians*, from the city. These Nestorians now fled to the old Syrian cities, which early had been so hospitable to Greek learning and thinking.[2] Being now beyond the reach of Christian intolerance and in a friendly atmosphere, they remained there, developing excellent higher schools of the old Greek type, and there the Mohammedans found them when they overran Syria, in 635 A.D.

Mohammedanism now came in contact with an educated people, as it did also in Babylonia (637), in Assyria (640), and in Egypt (642), and the need of a better statement of the somewhat crude faith now became evident. The same process now took place as had occurred earlier with Christianity. The Nestorian

[1] "In the school of Nisibis the Church possessed an institution, which for centuries secured her a system of higher education, and therewith an important social and political position. To the older literature, consisting of translations, there was added, from the middle of the fifth century onward, a large number of philosophical, scientific, and medical treatises belonging to Greek antiquity. and especially the works of Aristotle. Through these Greek wisdom and learning, clothed in Syrian attire, found a home on these borders of Christendom." (Müller, D. K., *Kirchengeschichte*, vol. I, p. 278.)

[2] "By the year 600 A.D. the triumph of the oriental element in Christendom had well-nigh banished learning and education from the domain of the Church, giving place to a gloomy, unquestioning faith which sank ever deeper and deeper in the mire of superstition. What enlightenment survived had found a home beyond the limits of the Roman Empire, — in Ireland, in the extreme West; in Syria, in the far East." (Davidson, Thomas, *History of Education*, p. 133.)

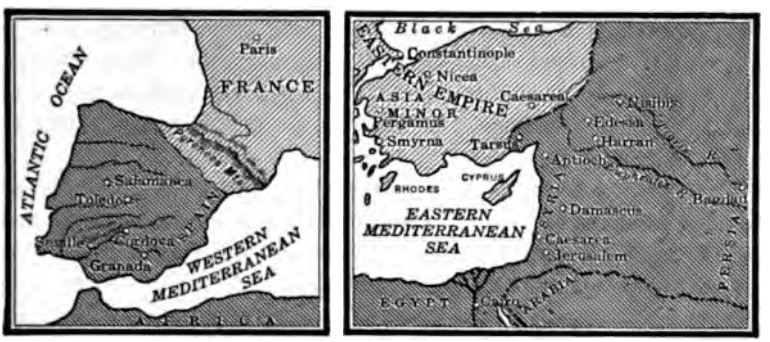
Christians and the Syrian monks became the scholars for the Mohammedans, and the Mohammedan faith was clothed in Greek forms and received a thorough tincturing of Greek philosophic thought. Within a century they had translated from Syriac into Arabic, or from the original Greek, much of the old Greek learning in philosophy, science, and medicine, and the cities of Syria, and in particular their capital, Damascus, became renowned for their learning. In 760 Bagdad, on the Tigris, was founded, and superseded Damascus as the capital. Extending eastward, these people were soon busy absorbing Hindu mathematical knowledge, obtaining from them (c. 800) the so-called Arabic notation and algebra.

They develop schools and advance learning. In 786 Haroun-al-Raschid became Caliph at Bagdad, and he and his son made it an intellectual center of first importance. In all the known world probably no city, not even Constantinople, during the latter part of the eighth century and most of the ninth, could vie with Bagdad as a center of learning. Basra, Kufa, and other eastern cities were also noted places. Schools were opened in connection with the mosques (churches), a university after the old Greek model was founded, a large library was organized, and an observatory was built. Large numbers of students thronged the city, learned Greeks and Jews taught in the schools, and a number of advances on the scientific work done by the Greeks were made. A degree of the earth's surface [1] was measured on the shores of the Red Sea; the obliquity of the ecliptic was determined (c. 830); astronomical tables were calculated; algebra and trigonometry were perfected; discoveries in chemistry not known in Europe until toward the end of the eighteenth century, and advances in physics for which western Europe waited for Newton (1642–1727), were made; and in medicine and surgery their work was not duplicated until the early nineteenth century. Their scholars wrote dictionaries, lexicons, cyclopædias, and pharmacopœias of merit (**R. 86**).

This eastern learning was now gradually carried to Spain by traveling Mohammedan scholars, and there the energy of conquest was gradually turned to the development of schools and learning. By 900 a good civilization and intellectual life had been developed in Spain, and before 1000 the teaching in Spain,

[1] This was determined as being 56 1/3 miles, which would make the circumference of the earth 20,280 miles. The correct distance is 69 miles.

especially along Greek philosophical lines, had become sufficiently known to attract a few adventurous monks from Christian Europe. Gerbert (953–1003), afterward Pope Sylvester II (p. 159), was one of the first to study there, though for this he was



THE MOSLEM WEST THE MOSLEM EAST

FIG. 51. SHOWING CENTERS OF MOSLEM LEARNING

accused of having transactions with the Devil, and when he died suddenly at fifty, four years after having been elevated to the Papacy, monks over Europe are recorded as having crossed themselves and muttered that the Devil had now claimed his reward. A monk from Monte Cassino also studied at Bagdad, and brought back some of the eastern learning to his monastery.

Mohammedan reaction sends scholars to Spain. The great intellectual development at Bagdad was in part due to the patronage of a few caliphs of large vision, and was of relatively short duration. The religious enthusiasts among the Mohammedans were in reality but little more zealous for Hellenic learning than the Fathers of the Western Church had been. Finally, about 1050, they obtained the upper hand and succeeded in driving out the Hellenic Mohammedans, just as the Eastern Christians had driven out the Nestorians, and these scholars of the East now fled to northern Africa and to Spain.[1]

Almost at once a marked further development in the intellectual life of Spain took place. In Cordova, Granada, Toledo, and

[1] The fanaticism of the eastern Arabs now reasserted itself, and higher education in the Mohammedan countries of the East drew permanently to a close. A harsh, rigid orthodoxy, fatal to educational progress, now triumphed. The coming of the Turks only made matters worse, and with their advent education throughout Arabia and Asia Minor became a thing of the past. Some day it will be the task of western Europe to hand back schools and learning to the Mohammedan East. This may be one of the by-products of the great World War

Seville strong universities were developed, where Jews and Hellenized Mohammedans taught the learning of the East, and made further advances in the sciences and mathematics. Physics, chemistry, astronomy, mathematics, physiology, medicine, and surgery were the great subjects of study. Greek philosophy also was taught. They developed schools and large libraries, taught geography from globes, studied astronomy in observatories, counted time by pendulum clocks, invented the compass and gunpowder, developed hospitals, and taught medicine and surgery in schools (**R. 86**).

Their cities were equally noteworthy for their magnificent palaces,[1] mosques, public baths, market-places, aqueducts, and paved and lighted streets — things unknown in Christian Europe for centuries to come (**R. 85**). It became fashionable for wealthy men to become patrons of learning, and to collect large libraries and place them at the disposal of scholars, thus revealing interests in marked contrast to those of the fighting nobility of Christian Europe.

Their influence on western Europe. Western Europe of the tenth to the twelfth centuries presented a dreary contrast, in almost every particular, to the brilliant life of southern Spain. Just emerging from barbarism, it was still in an age of general disorder and of the simplest religious faith.[2] The age of reason and of scientific experiment as a means of arriving at truth had not yet dawned, and would not do so for centuries to come. Monks and clerics, representing the one learned class, regarded this Moslem science as "black art," and in consequence Europe, centuries later, had slowly to rediscover the scientific knowledge which might have been had for the taking. Only the book science of Aristotle would the Church accept, and even this only after some hesitation (**Rs. 89, 90**).

Western Europe had, however, advanced far enough through the study of the Seven Liberal Arts to desire corrected and additional texts of the earlier classical writers, particularly Aristotle, and also to be willing to accept some of the mathematical knowl-

[1] The Alhambra, built between 1238 and 1354, at Granada, is an exquisite example of their art. (See plate in vol. 1, p. 658, of the *Encyclopædia Britannica*, 11th ed., for an illustration of their architecture and art.)

[2] It was an age of superstition and miracles, diabolic influences, witchcraft and magic, private warfare, trials by ordeal, robber bands, little dirty towns, no roads, unsanitary conditions, and miserable homes. Even the nobility had few comforts and conveniences, and personal cleanliness was not common. Disease was punishment for sin and to be cured by prayer, while the insane were scourged to cast out the devils within them.

edge of these Saracens. It was here that the Moslem learning in Spain helped in the intellectual awakening of the rest of Europe. Adelhard, an English monk, studied at Cordova about 1120, and took back with him some knowledge of arithmetic, algebra, and geometry. His *Euclid* was in general use in the universities by 1300. Gerard of Cremona, in Lombardy (1114–1187), who studied at Toledo a little later, rendered a similar service for Italy. He also translated many works from the Arabic, including Ptolemy's *Almagest* (p. 49), a book of astronomical tables, and Alhazen's (Spanish scholar, c. 1100) book on Optics. Other monks studied in the Spanish cities during the twelfth century, a few of whom brought back translations of importance. Frederick II [1] employed a staff of Jewish physicians to translate Arabic works into Latin, but, due to his continual war against the Pope and his final outlawry by the Church, his work possessed less significance than it otherwise might have done. Among the books thus translated was the medical textbook of Avicenna (980–1037), based in turn on the Greek works by Galen and Hippocrates of Cos (p. 197). This book described ailments and their treatment in detail, became the standard textbook in the medical faculties of the universities, and was used until the seventeenth century. Another Moslem whose translated writings had great influence on Europe was Averroës (1126–1198) who tried to unite the philosophy of Aristotle with Mohammedanism (**R. 88**). His influence on the thinkers of the later Middle Ages was large, he being regarded as the greatest commentator on Aristotle from the days of Rome to the time of the Renaissance.



FIG. 52. ARISTOTLE

What Europe obtained through Moslem sources which it prized most, though, was the commentary on Aristotle by Averroës and the works of Aristotle (**R. 88**). The list of the books of Aristotle

[1] Frederic II was Emperor of the mediæval Holy Roman Empire, ruling from 1227 to 1250. Though a German by birth, he had lived long in Sicily, and spent most of his time in Italy after becoming Emperor. He greatly admired the Saracens for their learning, and tried to transfer some of their knowledge to Christian Europe. He lived, however, at a time when the Papacy was cementing its temporal power and the Pope was becoming the Emperor of Europe. This encroachment Frederick resisted and tried to break, but without success. At his death the mediæval German dream of world empire perished; Germany was left a collection of feudal States; and the temporal power of the Pope was henceforth for centuries to come undisputed.

in use in the mediæval universities by 1300 (R. 87) reveals the great importance of the additions made. By the middle of the twelfth century Aristotle's *Ethics*, *Metaphysics*, *Physics*, and *Psychology*, as well as some of his minor works, had been translated into Latin and were beginning to be made available for study. The translation route through which these works had been derived was a roundabout one — Greek, Syriac, Arabic, Castilian, Latin — and hence the translations could not be very accurate, but they sufficed for the needs of Europe until the original Greek versions were recovered when the Venetians and Crusaders took and sacked Constantinople, in 1204. These were then translated directly into the Latin. Western Europe also was ready to use the Arabic (Hindu) system of notation, the elements of algebra, Euclid's geometry, and Ptolemy's work on the motion of the heavens. These contributions western Europe was ready for; the larger scientific knowledge of the Saracens, their pharmacopœias, dictionaries, cyclopædias, histories, and biographies, it was not yet ready to receive.

One other influence crept in from these peoples which was of large future importance — the music and light literature and love songs of Spain. There had been developed in this sunny land a life of light gayety, chivalrous gallantry, elegant courtesies, and poetic and musical charm, and this gradually found its way across the Pyrenees. At first it affected Provence and Languedoc, in southern France, then Sicily and Italy, and finally the gay contagion of lute and mandolin and love songs spread throughout all western Europe. A race of troubadours and minnesingers arose, singing in the vernacular, traveling about the country, and being entertained in castle halls.

> Lordlyng listneth to my tale
> Which is merryr than the nightengale

won admission at any castle gate. "Out of these genial but not orthodox beginnings the polite literature of modern Europe arose."

II. THE RISE OF SCHOLASTIC THEOLOGY

The eleventh century a turning-point. By the end of the eleventh century a distinct turning-point had been reached in the struggle to save civilization from perishing. From this time on it was clear that the battle had been won, and that a new Christian civilization would in time arise in western Europe.

Much still remained to be done, and centuries of effort would be required, but the Church, almost for the first time in more than six hundred years, felt that it could now pause to organize and systematize its faith. The invasions and destruction of the Northmen had at last ceased, the Mohammedan conquests were over, almost the last of the Germanic tribes in Europe had settled down and had accepted Christianity,[1] and the fighting nobility of Europe were being held somewhat in restraint by the might of the Church, the "Truce of God" (**R. 79**), and the softening influence of chivalric education (**R. 80**). There were many evidences, too, by the end of the eleventh century, that the western Christian world, after the long intellectual night, was soon to awaken to a new intellectual life. The twelfth century, in particular, was a period when it was evident that some new leaven was at work.

Up to about the close of the eleventh century western Europe had been living in an age of simple faith. The Christian world everywhere lay under "a veil of faith, illusion, and childish prepossession." The mysteries of Christianity and the many inconsistencies of its teachings and beliefs were accepted with childlike docility, and the Church had felt little call to organize, to systematize, or to explain. Here and there, to be sure, some questioning monk or cleric had raised questions over matters [2] of faith which his reason could not explain, and had, perhaps, for a time disturbed the peace of orthodoxy, but a statement somewhat similar to that made by Anselm of Canterbury (footnote, p. 173), as to the precedence of faith over reason, had usually been sufficient to silence all inquiry. Once, in the latter part of the eleventh century, when a great discussion as to the nature of knowledge had taken place among the leaders of the Church, a church council had been called to pass upon and give final settlement to the questions raised.[3]

[1] Christianity had not as yet been introduced among the mixed Slavic and Germanic tribes along the eastern Baltic. In Prussia and Lithuania, where missionary efforts had been made from 900 on, success did not come until more than three centuries later. (See art. "Missions," *Ency. Brit.*, 11th ed., vol. 18.)

[2] The more important questions arising concerned the Trinity, the Eucharist, and Transubstantiation.

[3] This discussion was over what was known as nominalism *vs.* realism. Anselm of Canterbury (1034–1109), basing his argument largely on some parts of Plato, had declared that ideas constituted our real existence. Roscellinus of Compiègne (1050–1106), basing his argument on parts of the *Organon* of Aristotle, had held that ideas or concepts are only names for real, concrete things. Anselm, as a realist, contended that the human senses are deceptive, and that revealed truth alone is reliable. Roscellinus, as a nominalist, held that truth can be reached only through investiga-

Rise of the spirit of inquiry. As the cathedral schools grew in importance as teaching institutions, and came to have many teachers and students, a few of them became noted as places where good instruction was imparted and great teachers were to be found. Canterbury in England, Paris and Chartres in France, and several of the cities in northern Italy early were noted for the quality of their instruction. The great teachers and the keenest students of the time were to be found in the cathedral schools in these places, and the monastic schools now lost their earlier importance as teaching institutions. By the twelfth century they had been completely superseded as important teaching centers by the rapidly developing cathedral schools. To these more important cathedral schools students now came from long distances to study under some noted teacher. Says McCabe: [1]

> The scholastic fever which was soon to influence the youth of Europe, had already set in. You could not travel far over the rough roads of France without meeting some footsore scholar, making for the nearest large monastery or cathedral town. Robbers, frequently in the service of the lord of the land, infested every province. It was safest to don the coarse frieze tunic of the pilgrim, without pockets, sling your little wax tablets and stylus at your girdle, strap a wallet of bread and herbs and salt on your back, and laugh at the nervous folk who peeped out from their coaches over a hedge of pikes and daggers. Few monasteries refused a meal or a rough bed to the wandering scholar. Rarely was any fee exacted for the lesson given.

The cathedral school in connection with the church of Notre Dame [2] became especially famous for its teachers of the Liberal Arts (particularly Dialectic) and of Theology, and to this school, just as the eleventh century was drawing to a close, came a youth, then barely twenty years of age, who is generally regarded as having been the keenest scholar of the twelfth century. His brilliant intellect soon enabled him to refute the instruction of his teachers and to vanquish them in debate. His name was Abelard. Before long he himself became a teacher of Grammar and Logic at Paris, and later of Theology, and, so widely had he

tion and the use of reason. The church accepted the realism of Anselm as correct, and Roscellinus was compelled to recant. The stifling effect of such an attitude toward honest doubt can be imagined.

[1] McCabe, Joseph, *Peter Abelard*, p. 7.

[2] By the beginning of the eleventh century this cathedral school had become the most important in France, a position which it retained for centuries. It was the great center for theological study, and drew to it a succession of eminent teachers — William of Champeaux, Abelard, Peter the Lombard — and, in time, thousands of students.

read, so clearly did he appeal to the reason of his hearers, and so incisive was his teaching, that he attracted large numbers of students to his lectures. To assist in his teaching of Theology he prepared a little textbook, *Sic et Non* (Yea and Nay), in which he raised for debate many questions as to church teachings (**R. 91 b**), such as "That faith is based on reason, or not." In the introduction to this textbook he held that "constant and frequent questioning is the first key to wisdom" (**R. 91 a**). His method was to give the authorities on both sides, but to render no decision. His boldness in raising such questions for debate was new, and his failure to give the students a decision was quite unusual, while his claim that reason was antecedent to faith was startling. Even after being driven from Paris, in part because of this boldness and in part because of a most unfortunate incident which deservedly ruined his career in the Church, students in numbers followed him to his retreat and listened to his teachings. His method of instruction was for the time so unusual and his spirit of inquiry so searching that he stimulated many a young mind to a new type of thinking. One of his pupils was Peter the Lombard (p. 171), who completely redirected the teaching of theology with his *Book of Sentences* (c. 1145). This was based largely on Abelard's method, except that a positive and orthodox decision was presented for each question raised.

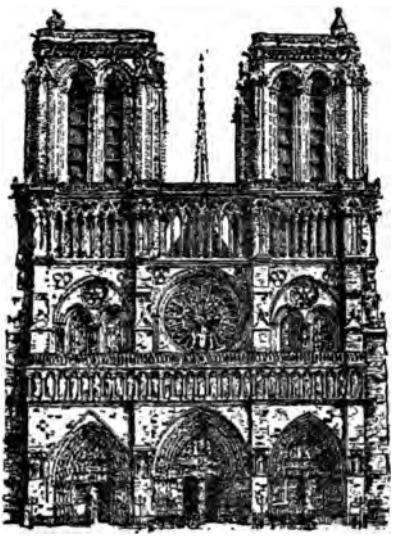


FIG. 53. THE CATHEDRAL OF NOTRE DAME, AT PARIS

The present cathedral was begun in 1163, consecrated in 1182, and completed in the thirteenth century. It is built on an island in the Seine, and on the site of a church built in the fourth century. The little community which grew up about the cathedral church formed the nucleus about which the city of Paris eventually grew. This cathedral front, with its statues and beautiful carving, formed a type much followed during the great period of cathedral-building (thirteenth century) in Europe. The school in connection with this cathedral early became famous.

What took place at Paris also took place, though generally on a smaller scale, at many other cathedral and monastery schools

This was the work of Scholasticism. The movement was not characterized by the evolution of new doctrines, but by a systematization and organization into good teaching form of what had grown up during the preceding thousand years. To a large degree it was also an "accommodation" of the old theology to the new Aristotelian philosophy which had recently been brought back to western Europe, and the statement of the Christian doctrines in good philosophic form.

The organizing work of the Schoolmen. Peter the Lombard (1100–1160), whose *Book of Sentences*, mentioned above, had so completely changed the character of the instruction in Theology, began this work of theological reorganization. Albert the Great (*Albertus Magnus*, 1193–1280) was the first of the great Schoolmen, and has been termed "the organizing intellect of the Middle Ages." He was a German Dominican monk,[1] born in Swabia, and educated in the schools of Paris, Padua, and Bologna. Later he became a celebrated teacher at Paris and Cologne. He was the first to state the philosophy of Aristotle in systematic form, and was noted as an exponent of the work of Peter the Lombard. Thomas Aquinas (c. 1225–1274), the greatest and most influential scholastic philosopher of the Middle Ages, studied first at Monte Cassino and Naples, and then at Paris and Cologne, under Albertus Magnus. He later became a noted teacher of Philosophy and Theology at Rome, Bologna, Viterbo, Perugia, and Naples. Under him Scholasticism came to its highest development in his harmonizing the new Aristotelianism with the doctrines of the Church. His class teaching was based on Aristotle,[2] the Vulgate Bible, and Peter the Lombard's *Book of Sentences*. During the last three years of his life he wrote his *Summa Theologicæ*, a book which has ever since been accepted as an authoritative statement of the doctrines of the Roman Catholic Church.

[1] The Dominicans, or Black Friars, were a new teaching and preaching monastic order, founded in 1216. It was a revival of monasticism, directed toward more modern ends. The Dominicans established themselves in connection with the new universities, and sought to control education and to defend orthodoxy. Another new order of this same period was that of the Franciscans, or Gray Friars, founded by Saint Francis in 1212. Their work was directed still more to preaching, missions, and public service. They were a less intellectual but a more democratic brotherhood. It was the Franciscans who followed the armies of Spain to Mexico, and later built and conducted the missions of the central and southern California coast.

[2] Special translations of Aristotle's *Rhetoric* and *Politics*, from the original Greek texts, obtained at Constantinople by the Crusaders, were made for Thomas Aquinas at his special request, about 1260, by William of Moerbeke, who knew enough Greek to perform the task. This gave him better translations from which to lecture and write.

The character of the organization made by Peter the Lombard and Thomas Aquinas may be seen from an examination of their method of presentation, which was dogmatic in form and similar in the textbooks of each. The field of Christian Theology was divided out into parts, heads, subheads, etc., in a way that would cover the subject, and a group of problems, each dealing with some doctrinal point, was then presented under each. The problem was first stated in the text. Next the authorities and arguments for each solution other than that considered as orthodox were presented and confuted, in order. The orthodox solution was next presented, the arguments and authorities for such solution quoted, and the objections to the correct solution presented and refuted (**R. 152**).

Results of their work. The work of the Schoolmen was to organize and present in systematic and dogmatic form the teachings of the Church (**R. 92**). This they did exceedingly well, and the result was a thorough organization of Theology as a teaching subject. They did little to extend knowledge, and nothing at all to apply it to the problems of nature and man. Their work was abstract and philosophical instead, dealing wholly with theological questions. The purpose was to lay down principles, and to offer a training in analysis, comparison, classification, and deduction which would prepare learned and subtle defenders of the faith of the Church. So successful were the Schoolmen in their efforts that instruction in Theology was raised by their work to a new position of importance, and a new interest in theological scholarship and general learning was awakened which helped not a little to deflect many strong spirits from a life of warfare to a life of study. They made the problems of learning seem much more worth while, and their work helped to create a more tolerant attitude toward the supporters of either side of debatable questions by revealing so clearly that there are two sides to every question. This new learning, new interest in learning, and new spirit of tolerance the rising universities inherited.

III. LAW AND MEDICINE AS NEW STUDIES

The old Roman cities. The old Roman Empire, it will be remembered, came to be largely a collection of provincial cities. These were the centers of Roman civilization and culture. After the downfall of the governing power of Rome, the great highways were no longer repaired. brigandage became common, trade and

intercourse largely ceased, and the provincial cities which were not destroyed in the barbarian invasions declined in population and number, passing under the control of their bishops who long ruled them as feudal lords. During the long period of disorder many of the old Roman cities entirely disappeared (**R. 49**). Only in Italy, and particularly in northern Italy, did these old cities retain anything of their earlier municipal life, or anything worth mentioning of their former industry and commerce. But even here they lost most of their earlier importance as centers of culture and trade, becoming merely ecclesiastical towns. After the death of Charlemagne, the break-up of his empire, and the institution of feudal conditions, the cities and towns declined still more in importance, and few of any size remained.

In Italy feudalism never attained the strength it did in northern Europe. Throughout all the early Middle Ages the cities there retained something of their old privileges, though ruled by prince-bishops residing in them. They also retained something of the old Roman civilization, and Roman legal usages and some knowledge of Roman law never quite died out. In other respects they much resembled mediæval cities elsewhere.

Reëstablishment of the Holy Roman Empire. After the disintegration of Charlemagne's empire, the portion of it now known as Germany broke up into fragments, largely independent of one another, and full of fight and pride. The result there was continual and pitiless warfare. This, coupled with the raids of the Northmen along the northern coast and the Magyars on the east, led to the election of a king in 919 (Henry the Fowler) who could establish some semblance of unity and order. By 961 the German duchies and small principalities had been so consolidated that a succeeding king (Otto I) felt himself able to attempt to reëstablish the Holy Roman Empire by subjugating Italy and annexing it as an appendage under German rule.

He descended into Italy (961), subjugated the cities, overthrew the Papacy, created a pope to his liking, and reëstablished the old Empire, in name at least. For a century the German rule was nominal, but with the outbreak of the conflict in the eleventh century between king and pope over the question of which one should invest the bishops with their authority (known as the *investiture conflict*, 1075–1122), Pope Gregory VII humbled the German king (Henry IV) at Canossa (1077) and won a partial success. Then followed repeated invasions of Italy, and a cen-

tury and a half of conflicts between pope and king before the dream of universal empire under a German feudal king ended in disaster, and Italy was freed from Teutonic rule.

The Italian cities revive the study of Roman law. As was stated above, Roman legal usages and some knowledge of Roman

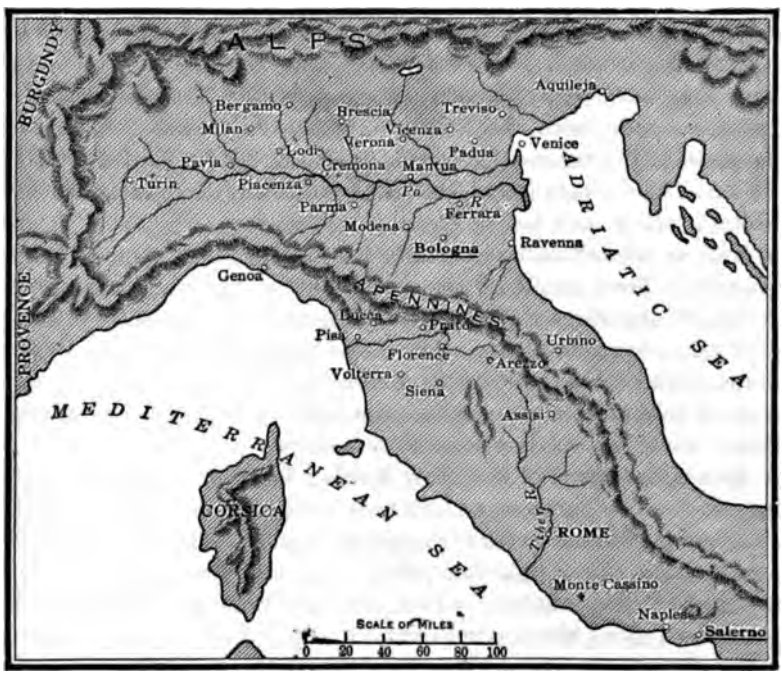


FIG. 54. THE CITY-STATES OF NORTHERN ITALY

All of the cities in the valley of the Po, except Turin, Pavia, and Mantua, were members of the Lombard League of 1167.

law had never quite died out in these Italian cities. But, while regarded with reverence, the law was not much understood, little study was given to it, and important parts of it were neglected and forgotten. The struggle with the ruling bishops in the second half of the eleventh century, and the discussions which arose during the investiture conflict, caused new attention to be given to legal questions, and both the study of Roman (civil) and Church (canon) law were revived. The Italian cities stood with the Papacy in the struggles with the German kings, and, in 1167, those in the Valley of the Po formed what was known as the *Lombard League* for defense. Under the pressure of German

oppression they now began a careful study of the known Roman law in an effort to discover some charter, edict, or grant of power upon which they could base their claim for independent legal rights. The result was that the study of Roman law was given an emphasis unknown in Italy since the days of the old Empire. What had been preserved during the period of disorder at last came to be understood, additional books of the law were discovered, and men suddenly awoke to a realization that what had been before considered as of little value actually contained much that was worth studying, as well as many principles of importance that were applicable to the conditions and problems of the time.

The great student and teacher of law of the period was Irnerius of Bologna (c. 1070–1137), who began to lecture on the *Code* and the *Institutes* of Justinian about 1110 to 1115, and soon attracted large numbers of students to hear his interpretations. About this

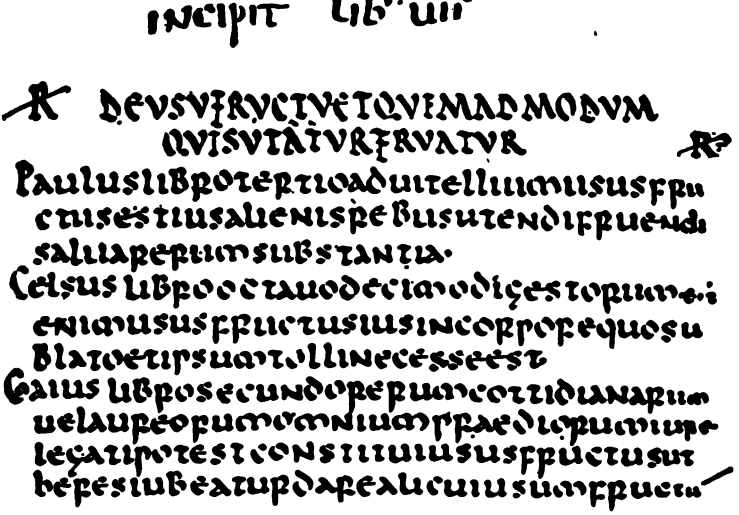


FIG. 55. FRAGMENT FROM THE RECOVERED "DIGEST" OF JUSTINIAN
Capitals and small letters are here used, but note the difficulty of reading without spacing or punctuation.

same time the *Digest*, much the largest and most important part of the old law, was discovered and made known.[1] This gave clear-

[1] In 529 the Eastern Emperor, Justinian (see p. 76), directed that an orderly compilation be prepared of the many and confused laws and decisions which had been made in the Roman Empire, with a view to producing a standard body of

ness to the whole, as before its discovery the study of Roman law was like the study of Aristotle when only parts of the *Organon* were known. Irnerius and his co-laborers at Bologna now collected and arranged the entire body of Roman civil law (*Corpus Juris Civilis*) (R. 93), introduced the *Digest* to western Europe, and thus made a new contribution of first importance to the list of possible higher studies. Law now ceased to be a part of Rhetoric (p. 157) and became a new subject of study, with a body of material large enough to occupy a student for several years. This was an event of great intellectual significance. A new study was now evolved which offered great possibilities for intellectual activity and the exercise of the critical faculty, while at the same time showing veneration for authority. Law was thus placed alongside Theology as a professional subject, and the evolution of the professional lawyer from the priest was now for the first time made possible.

Canon law also organized as a subject of study. Inspired by the revival of the study of civil law, a monk of Bologna, Gratian by name, set himself to make a compilation of all the Church canons which had been enacted since the Council of Nicæa (325) formulated the first twenty (p. 96), and of the rules for church government as laid down by the church authorities. This he issued in textbook form, about 1142, under the title of *Decretum Gratiani*. So successful were his efforts that his compilation was "one of those great textbooks that take the world by storm." It did for canon (church) law what the rediscovery of the Justinian *Code* had done for civil law; that is, it organized canon law as a new and important teaching subject.

The *Decretum* of Gratian was published in three parts, and was organized after the same plan as Abelard's *Sic et Non*, except that Gratian drew conclusions from the mass of evidence he presented on each topic. It contained 147 "Distinctions" (questions; cases of church policy), upon each of which were cited the church canons

Roman law in place of the unwieldy mass of contradictory material then existing. The result was the *Corpus Juris Civilis*, worked out by a staff of eminent lawyers between 529 and 533 (R. 93). This consisted of

I. The *Code*, in twelve books, containing the Statutes of the Emperors:
II. The *Digest*, in fifty books, containing pertinent extracts from the opinions of celebrated Roman lawyers:
III. The *Institutes*, in four books, being an elementary textbook on the law for the use of students:
IV. The *Novellæ*, or new Statutes, the final edition of which was issued in 565, and included the laws from 533 on. This was preserved and used in the East, but came too late to be of much service to the Western Empire.

and the views and decisions of important church authorities.[1] This volume was added to by popes later on,[2] so that by the fifteenth century a large body of canon law had grown up, which was known as the *Corpus Juris Canonici*. Canon Law was thus separated from Theology and added to Civil Law as another new subject of study for both theological and legal students, and the two subjects of Canon and Civil Law came to constitute the work of the law faculties in the universities which soon arose in western Europe.

The beginnings of medical study. The Greeks had made some progress in the beginnings of the study of disease (p. 47). Aristotle had given some anatomical knowledge in his writings on animals, and had theorized a little about the functions of the human body. The real founder of medical science, though, was Hippocrates, of the island of Cos (c. 460–367 B.C.), a contemporary of Plato. He was the first writer on the subject who attempted to base the practice of the healing art on careful observation and scientific principles. He substituted scientific reason for the wrath of offended deities as the causes of disease, and tried to offer proper remedies in place of sacrifices and prayers to the gods for cures. His descriptions of diseases were wonderfully accurate, and his treatments ruled medical practice for ages.[3] He



FIG. 56. THE FATHER OF MEDICINE
HIPPOCRATES OF COS (460–367? B.C.)

[1] The subdivisions were as follows:
I. Contained 106 "distinctions," relating to ecclesiastical persons and affairs.
II. Contained 36 "distinctions," relating to problems arising in the administration of canon law.
III. Contained 5 "distinctions," relating to the ritual and sacraments of the Church.

[2] The additions were:
I. The *Decretals* of Pope Gregory IX, issued in 1234, in five books.
II. A Supplement to the above by Pope Boniface VIII (*Liber Sextus*), issued in 1298.
III. The *Constitutions* of Clementine, issued in 1317.
IV. Several additions of Papal Laws, not included in any of the above.

[3] He held that the body contained four humors — blood, phlegm, yellow bile, and black bile. Disease was caused by an undue accumulation of some one of the four. Hence the office of the physician was to reduce this accumulation by some means,

knew, however, little as to anatomy. Another Greek writer, Galen[1] (131–201 A.D.), wrote extensively on medicine and left an anatomical account of the human body which was unsurpassed for more than a thousand years. His work was known and used by the Saracens. Avicenna (980–1037), an eastern Mohammedan, wrote a *Canon of Medicine* in which he summarized the work of all earlier writers, and gave a more minute description of symptoms than any preceding writer had done. These works, together with a few minor writings by teachers in Spain and Salerno, formed the basis of all medical knowledge until Vesalius published his *System of Human Anatomy*, in 1543.

The Roman knowledge of medicine was based almost entirely on that of the Greeks, and after the rise of the Christians, with their new attitude toward earthly life and contempt for the human body, the science fell into disrepute and decay. Saint Augustine (354–430), in his great work on *The City of God*, speaks with some bitterness of "medical men who are called anatomists," and who "with a cruel zeal for science have dissected the bodies of the dead, and sometimes of sick persons, who have died under their knives, and have inhumanly pried into the secrets of the human body to learn the nature of disease and its exact seat, and how it might be cured." [2] During the early Middle Ages the Greek medical knowledge practically disappeared, and in its place came the Christian theories of satanic influence, diabolic action, and divine punishment for sin. Correspondingly the cures were prayers at shrines and repositories of sacred relics and images, which were found all over Europe, and to which the injured or fever-stricken peasants hied themselves to make offerings and to pray, and then hope for a miracle.

Toward the middle of the eleventh century Salerno, a small city delightfully situated on the Italian coast (see Map, p. 194), thirty-four miles south of Naples, began to attain some reputa-

such as blood-letting, purging, blisters, diaphoretics, etc. In the monastery of Saint Gall (see Diagram, R. 69) a blood-letting room was a part of the establishment, and this practice was continued until well into the nineteenth century.

[1] Galen was born at Pergamon, in the reign of the Emperor Hadrian. He studied medicine at Pergamon, Smyrna, and Alexandria, and for a time lived in Rome. Returning to Pergamon he was appointed physician to the athletes in the gymnasium there. He later went back to Rome and became physician to the Emperor Marcus Aurelius. He is credited with five hundred works on literature, philosophy, and medicine, one hundred and eighteen of which have survived. In medicine he wrote on anatomy, physiology, diagnosis, pathology, therapeutics, materia medica, surgery, hygiene, and dietetics. He was the first to use the pulse as a means of detecting physical condition.

[2] Saint Augustine, *The City of God*, book XXII, chap. 24.

tion as a health resort. In part this was due to the climate and in part to its mineral springs. Southern Italy had, more than any other part of western Europe, retained touch with old Greek thought. The works of Hippocrates and Galen had been preserved there, the monks at Monte Cassino had made some translations, and sometime toward the middle of the eleventh century the study of the Greek medical books was revived here. The Mohammedan medical work by Avicenna (p. 185), also early became known here in translation. About 1065 Constantine of Carthage, a converted Jew and a learned monk, who had traveled extensively in the East [1] and who had been forced to flee from his native city because of a suspicion of "black art," began to lecture at Salerno on the Greek and Mohammedan medical works and the practice of the medical art. In 1099 Robert, Duke of Normandy, returning from the First Crusade, stopped here to be cured of a wound, and he and his knights later spread the fame of Salerno all over Europe. The result was the revival of the study of Medicine in the West, and Salerno developed into the first of the medical schools of Europe. Montpellier, in southern France, also became another early center for the study of Medicine, drawing much of its medical knowledge from Spain. Another new subject of professional study was now made possible, and Faculties of Medicine were in time organized in most of the universities as they arose. The instruction, though, was chiefly book instruction, Galen being the great textbook until the seventeenth century.

IV. OTHER NEW INFLUENCES AND MOVEMENTS

The Crusades. Perhaps the most romantic happenings during the Middle Ages were that series of adventurous expeditions to the then Far East, undertaken by the kings and knights of western Europe in an attempt to reclaim the Holy Land from the infidel Turks, who in the eleventh century had pushed in and were persecuting Christian pilgrims journeying to Jerusalem. For centuries single pilgrims, small bands of pilgrims, and sometimes large numbers led by priest or noble, had journeyed to distant shrines, to Rome, and to the birthplace of the Saviour,[2]

[1] Often spoken of as Constantius Africanus. It is recorded that he studied the arts in Babylon, visited Egypt and India, and returned to his home in Carthage one of the most learned men of his age. Suspected of dealings with the Devil he fled to Salernum (c. 1065), taught there for many years, published many medical works of his own, and finally retired to the monastery of Monte Cassino, dying there in 1087.

[2] In 1064 a company of seven thousand is said to have started for the Holy Land.

impelled by pure religious devotion, a desire to do penance for sin, or seeking a cure from some disease by prayer and penance. It was the spirit of the age. Says Adams: [1]



FIG. 57. A PILGRIM OF THE MIDDLE AGES

(From an old manuscript in the British Museum)

A pilgrimage was . . . in itself a religious act securing merit and reward for the one who performed it, balancing a certain number for his sins, and making his escape from the world of torment hereafter more certain. The more distant and more difficult the pilgrimage, the more meritorious, especially if it led to such supremely holy places as those which had been sanctified by the presence of Christ himself. For the man of the world, for the man who could not, or would not, go into monasticism, the pilgrimage was the one conspicuous act by which he could satisfy the ascetic need, and gain its rewards. A crusade was a stupendous pilgrimage, under especially favorable and meritorious conditions.

The Mohammedan Arabs who took possession of the Holy Land in the seventh century had treated the pilgrims considerately, but the Turks were of a different stamp. In 1071 they had defeated the Eastern Emperor, captured all Asia Minor, and had taken possession of the fortress of Nicæa (Map, p. 183), near Constantinople. The Eastern Emperor now appealed to Rome for help. In 1077 the Turks captured Jerusalem, and returning pilgrims soon began to report having experienced great hardships. In 1095 Pope Urban, in a stirring address to the Council of Clermont (France), issued a call to the lords, knights, and foot soldiers of western Christendom to cease destroying their fellow Christians in private warfare, and to turn their strength of arms against the infidel and rescue the Holy Land. The journey was to take the place of penance for sin, many special privileges were extended to those who went, and those who died on the journey or in battle with the infidels were promised entrance into heaven.[2] To many

[1] Adams, G. B., *Civilization during the Middle Ages*, 2d ed., p. 261.

[2] "From Clermont the enthusiasm spread over France like wildfire. Stirring preachers, whereof the most notable was Peter the Hermit, set all France, peasant and noble, to arming. It was the old gospel of Mohammed recast in Christian guise: — pardon for sin and the spoils of the infidel if victorious! — a swift road to heaven if slain in the battle! Pressed with this hope and enthusiasm, armies to be reckoned by the hundreds of thousands were launched upon the East." (Davis, W. S., *Mediæval and Modern Europe*. p. 95.)

nobles and peasants, filled with a desire for adventure and a sense of personal sin, no surer way of satisfying either was to be found than the long pilgrimage to the Saviour's tomb. In France and England the call met with instant response. Unfortunately for the future of civilization, the call met with but small response from the nobles of German lands.

The First Crusade set out in 1096. A second went in 1144, and a third in 1187. These were the great Crusades, though five others were undertaken during the thirteenth century. Jerusalem was taken and lost. The Christians quarreled with one another and with the Greeks, though with the Saracens they established somewhat friendly relations, and a mutual respect arose. The armies which went were composed of all kinds of people — lords, knights, merchants, adventurers, peasants, outlaws — and a spirit of adventure and a desire for personal gain, as well as a spirit of religious devotion, actuated many who went. In 1204 the Venetians diverted the fourth crusade to the capture of Constantinople, and established there an outpost of their great commercial empire. The history of the crusades we do not need to trace. The important matter for our purpose was the results of the movement on the intellectual development of western Europe.

Results of the Crusades on western Europe. In a sense the Crusades were an outward manifestation of the great change in thinking and ideals which had begun sometime before in western Europe. They were at once both a sign and a cause of further change. The old isolation was at last about to end, and intercommunication and some common ideas and common feelings were being brought about. Both those who went and those who remained at home were deeply stirred by the movement. Christendom as a great international community, in which all alike were interested in a common ideal and in a common fight against the infidel, was a new idea now dawning upon the mass of the people, whereas before it had been but little understood.

The travel to distant lands, the sight of cities of wealth and power, and the contact with peoples decidedly superior to themselves in civilization, not only excited the imagination and led to a broadening of the minds of those who returned, but served as well to raise the general level of intelligence in western Europe. Some new knowledge also was brought back, but that was not at the time of great importance. The principal gain came in the

elimination forever of thousands of quarreling, fighting noblemen,[1] thus giving the kingly power a chance to consolidate holdings and begin the evolution of modern States; in the marked change of attitude toward the old problems; in the awakening of a new interest in the present world; in the creation of new interests and new desires among the common people; in the awakening of a spirit of religious unity and of national consciousness; and especially in the awakening of a new intellectual life, which soon found expression in the organization of universities for study and in more extensive travel and geographical exploration than the world had known since the days of ancient Rome. The greatest of all the results, however, came through the revival of trade, commerce, manufacturing, and industry in the rising cities of western Europe, with the consequent evolution of a new and important class of merchants, bankers, and craftsmen, who formed a new city class and in time developed a new system of training for themselves and their children.

The revival of city life. The old cities of central and northern Italy, as was stated above (p. 194), continued through the early Middle Ages as places of some little local importance. In the eleventh century they overthrew in large part the rule of their Prince-Bishops, and became little City-Republics, much after the old Greek model. Outside of Italy almost the only cities not destroyed during the period of the barbarian invasions were the episcopal cities, that is cities which were the residences of bishops.

Outside of Italy the present cities of western Europe either rose on the ruins of former Roman provincial cities, or originated about some monastery or castle, on or adjacent to land at one time owned by monks or feudal lord. An ever-increasing company of peasants, themselves little more than serfs in the beginning, huddled together in such places for the protection afforded, and a walled feudal town eventually resulted (**R. 94 a**). This later, in one way or another, secured its freedom from monastic control

[1] Of the thousands of petty lords and knights who went to the hot East, clad in the heavy armor of northern Europe, large numbers left their bones along the way or in the Syrian sands, and the landholdings at home reverted to the Crown. This was a crushing blow to the old feudal régime, advanced the cause of civilization, and helped in the rise of the modern nations. Especially was this true in France and England, whose knights went in large numbers to the East. In Germany the knights and nobles, as a class, refused to have anything to do with the Crusades, and hence they were not killed off or impoverished, but remained to rule and multiply and be troublesome. This is one reason for the much earlier rise and greater strength of French than German nationality, and one reason why Germany has been so much slower than France and England in developing a democratic type of civilization.

or feudal lord, and evolved into the free city we know to-day. Originally each little city was a self-sustaining community. The farming and grazing lands lay outside, while the people were crowded compactly together within the protecting town walls. The need for walls that could be manned for defense, gates that



FIG. 58. A TYPICAL MEDIÆVAL TOWN (PRUSSIAN)

All the elements of a typical mediæval town are seen here — the walls for defense, the watch-towers, the churches, the tall cathedral, the castle, and the high houses huddled together.

could shut out the marauder, the narrow, dirty streets, and the lack of any sanitary ideas, all alike tended to keep the towns small.[1] The insecurity of life, the constant warfare, the repeated failures or destruction of crops without and want within, and the high death-rate from disease, all kept down the population. A town of a thousand people in the early Middle Ages was a place of some importance, while probably no city outside of Italy, excepting Paris and London, had ten thousand inhabitants before the year 1200. In all England there were but 2,150,000 people, according to the Domesday Survey (1086), while to-day the city of London alone contains nearly three times that number.

[1] "As presented to the eye, a typical mediæval city would be a remarkable sight. Its extent would be small, both because of the limited population, and the need of making the circuit of the walls to be defended as short as possible; but within these walls the huge, many-storied houses would be wedged closely together. The narrow streets would be dirty and ill-paved — often beset by pigs in lieu of scavengers; but everywhere there would be bustling human life with every citizen elbowing close to everybody else. Out of the foul streets here and there would rise parish churches of marvelous architecture, and in the center of the town extended the great square — market-place — where the open-air markets would be held, and close by it, dwarfing the lesser churches, the tall gray cathedral — the pride of the community; close by, also, the City Hall, an elegant secular edifice, where the council met, where the great public feasts could take place, and above which rose the mighty belfry, whence clanged the great alarm-bell to call the citizens together in mass meeting, or to don armor and man the walls." (Davis, W. S., *Mediæval and Modern Europe*, p. 146.)

After about the year 1000 a revival of something like city life begins to be noticeable here and there in the records of the time (**R. 94 a**), and by 1100 these signs begin to manifest themselves in many places and lands. By 1200 the cities of Europe were numerous, though small, and their importance in the life of the times [1] was rapidly increasing (**R. 94 b**).

The rise of a city class. As the mediæval towns increased in size and importance the inhabitants, being human, demanded rights. Between 1100 and 1200 there were frequent revolts of the people of the mediæval towns against their feudal overlord, and frequent demands were made for charters granting privileges to the towns. Sometimes these insurrections were put down with a bloody hand. Sometimes, on the contrary, the overlord granted a charter of rights, willingly or unwillingly, and freed the people from obligation to labor on the lands in return for a fixed money payment. Sometimes the king himself granted the inhabitants a charter by way of curbing the power of the local feudal lord or bishop. The towns became exceedingly skillful in playing off lord against bishop, and the king against both. In England, Flanders, France, and Germany some of the towns had become wealthy enough to purchase their freedom and a charter at some time when their feudal overlord was particularly in need of money. These charters, or birth certificates for the towns, were carefully drawn and officially sealed documents of great value, and were highly prized as evidences of local liberty. The document created a "free town," and gave to the inhabitants certain specified rights as to self-government, the election of magistrates — aldermen, mayor, burgomaster — the levying and payment of taxes, and the military service to be rendered. Before the evolution of strong national governments these charters created hundreds of what were virtually little City-States throughout Europe (**R. 95**).

In these towns a new estate or class of people was now created (**R. 96**), in between the ruling bishops and lords on the one hand and the peasants tilling the land on the other. These were the citizens — freemen, bourgeoisie, burghers. Out of this new class

[1] In Italy, in particular, the cities became strong and powerful, and eventually overthrew the rule of the bishops and defeated the German Emperor, Frederick I, in a long battle to preserve their independence. In Flanders such cities as Ypres, Bruges, and Ghent, came to dominate there. In 1302 their burghers defeated the French army; and in the sixteenth century they helped to break the autocratic power of Spain in a great struggle for human and civic freedom. By the thirteenth century Hamburg, Lübeck, Bremen, Augsburg, and Nuremburg were important commercial cities in Germany.

of city dwellers new social orders — merchants, bankers, tradesmen, artisans, and craftsmen — in time arose, and these new orders soon demanded rights and obtained some form of education for their children. The guild or apprenticeship education which early developed in the cities to meet the needs of artisans and craftsmen (**R. 99**), and the burgh or city schools of Europe,

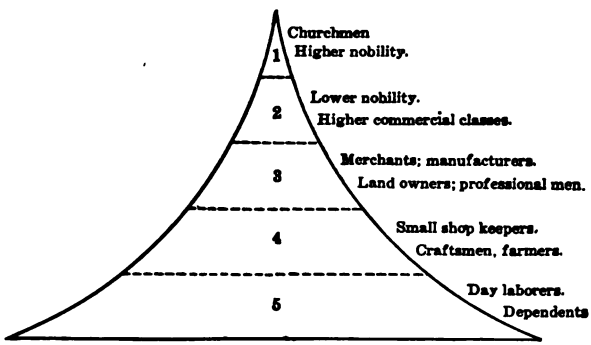


FIG. 59. THE EDUCATIONAL PYRAMID
(From Smith, W. R., *Educational Sociology*, p. 176)
The concave pyramid suggests comparative numbers. Formal education began at the top, and has slowly worked downward.

which began to develop in the thirteenth and fourteenth centuries, were the educational results of the rise of cities and the evolution of these new social classes. The time would soon be ripe for the mysteries of learning to be passed somewhat farther down the educational pyramid, and new classes in society would begin the mastery of its symbols.

The revival of commerce. The first city of mediæval Europe to obtain commercial prominence was Venice. She early sold salt and fish obtained from the lagoons to the Lombards in the Valley of the Po, and sent trading ships to the Greek East. By the year 1000 Venetian ships were bringing the luxuries and riches of the Orient to Venice, and the city soon became a great trading center. There the partially civilized Christian knight "spent splendidly," and the Bohemian, German, and Hunnish lords came[1] to buy such of the luxuries of the East as they could afford. By 1100 Venice was a free City-State, the mistress of the Adriatic, and the trade of the East with Christian Europe passed over her wharves. From the Crusades she profited greatly, carry-

[1] They came there because, due to their plundering and murdering proclivities, Venice forbade her merchants to go to them.

ing knights eastward in the great fleet she had developed, and carpets, fabrics, perfumes, spices, dyes, drugs, silks, and precious stones on the return voyage. From Tana and Trebizond her traders penetrated far into the interior. Her ships and merchants "held the Golden East in fee." By 1400 she was the wealthiest and most powerful city in Europe.

Genoa in time became the great rival of Venice. Marseilles also developed a large trade in the Mediterranean and with the north. From these three cities trade routes ran to the cities of Flanders, England, and Germany, as is shown in the map below. By the thirteenth century, Augsburg, Nuremburg, Magdeburg, Hamburg, Lübeck, Bremen, Antwerp, Ghent, Ypres, Bruges, and



FIG. 60. TRADE ROUTES AND COMMERCIAL CITIES

London were developing into great commercial cities. Despite bad roads, bad bridges,[1] bad inns, "robber knights" and bandits, the commerce once carried on by Rome with her provinces was reviving. Great fairs, or yearly markets, came to be held in the large interior towns, to which merchants came from near and far

[1] So poor were the mediæval bridges that the old prayer-books contained formulas for "commending one's soul to God ere starting to cross a bridge."

to display and exchange their wares, and, still more important, from the standpoint of advancing general education, to exchange ideas and experiences. The "luxuries" displayed at these markets by traveling merchants from the south — salt, pepper, spices, sugar, drugs, dyestuffs, glass beads, glassware, table implements, perfumes, ornaments, underwear, articles of dress, silks, velvets, carpets, rugs — dazzled and astounded the simple townspeople of western Europe. These fairs became educational forces of a high order.

The revival of industry and banking. The trading of articles at seaports and at the interior city fairs came first, and this soon worked a revolution in industry. Instead of agriculture being almost the only occupation, and the feeding of the local population the only purpose, with only such arts and industries practiced as were needed to supply the wants of the townsmen, it now became possible to create a surplus to barter at the fairs for luxuries from the outside. Local industries, heretofore of but little importance, now developed into trades, and the manufacture of articles for outside sale was begun. At first manufacturing was very limited in scope, and confined largely to local handicrafts or the imitation of imported articles, but later new and important industries arose — the glass industry in Venice, the gold and silver industry of Florence, the weaving industry at Mainz and Erfurt, and the wool industry of Flanders. The craftsman and artisan, as well as the merchant and trader, were now developed in the towns, and soon became important members of the new social order. As serfs and villeins[1] were set free from the land[2] they came to the towns, adding more members to the new industrial classes (**R. 96**). From 1200 on there was a great revival of industry in western Europe, and by 1500 merchants and craftsmen had won back the place once held by merchants and craftsmen in Roman life and trade.

At Florence a banking class arose, and instead of barter, banks and the use of money and credit were developed. From Florence this system gradually extended to the other commercial cities.

[1] The peasants were of two classes: (1) serfs, who were not free and who were attached to the soil, but unlike slaves had plots of land of their own and could not be sold off the land; and (2) villeins, who were personally free, but still were bound to their lord for much menial service and for many payments in produce and money.

[2] The Church originally held many serfs and villeins, as did the nobles. It began the process of setting them free, encouraging others to do likewise. In time it became common, as it did in our Southern States before the Civil War, for nobles in dying to set free a certain number of their serfs and villeins. These went as free men to the rising cities.

Gradually the mediæval objection to the taking of interest for the use of money, which the Church had forbidden in the early Middle Ages as "usury" and wicked, was overcome, and Italian bankers and merchants led the world in the establishment of that credit which has made modern trade and industry possible. With money once more in general use as a measure of value, the Arabic system of notation in use for commercial transactions, and credit at reasonable interest rates provided as a basis for finance, an era in trade and commerce and manufacturing set in unknown since the days of Roman rule. Order, security, and a wider extension of educational advantages now were needed, and nothing contributed more to securing these than the growth of wealth and manufacturing industries in the towns, and the extension of commerce and the use of money throughout the country. Nothing tends so powerfully to demand or secure these things as the possession of wealth among a people.

Education for these new social classes. With the evolution of these new social classes an extension of education took place through the formation of guilds.[1] The merchants of the Middle Ages traded, not as individuals, nor as subjects of a State which protected them, for there were as yet no such States, but as members of the guild of merchants of their town, or as members of a trading company. Later, towns united to form trading confederations, of which the Hanseatic League of northern Germany was a conspicuous example. These burgher merchant guilds became wealthy and important socially;[2] they were chartered by kings and given trading privileges analogous to those of a modern corporation (**R. 95**); they elbowed their way into affairs of State, and in time took over in large part the city governments; they obtained education for themselves, and fought with the church

[1] The mediæval guild was an important institution, and the guild idea was applied to many forms of mediæval associations. Thus we read of guilds of notaries in Florence, pleaders' and attorneys' guilds in London, medical guilds and barber-surgeons' guilds in various cities, and of the book-writers-and-sellers' guild in Paris. In a religious pageant given at York, England, on Corpus Christi Day, 1415, fifty-one different local guilds presented each a scene. (See Cheyney, E. P., *English Towns and Gilds.*, Pa. Sources, vol. II, no. 1.)

[2] "The ready money of the merchant was as effective a weapon as the sword of the noble, or the spiritual arms of the Church. Very speedily, also, the men of the cities began to seize upon one of the weapons which up to that time had been the exclusive possession of the Church, and one of the main sources of its power, — knowledge and intellectual training. With these two weapons in its hands, wealth and knowledge, the Third Estate forced its way into influence, and compelled the other two (Estates) to recognize it as a partner with themselves in the management of public concerns." (Adams, G. B., *Civilization during the Middle Ages*, 2d ed., p. 299.)

authorities for the creation of independent burgh schools;[1] they began to read books, and books in the vernacular began to be written for them;[2] they in time vied with the clergy and the nobility in their patronage of learning; they everywhere stood with the kings and princes to compel feudal lords to stop warfare and plundering and to submit to law and order;[3] and they entertained royal personages and drew nobles, clergy, and gentry into their honorary membership, thus serving as an important agency in breaking down the social-class exclusiveness of the Middle Ages. In these guilds, which were self-governing bodies debating questions and deciding policies and actions, much elementary political training was given their members which proved of large importance at a later time.

In the same way the craft guilds rendered a large educational service to the small merchant and worker, as they provided the technical and social education of such during the later period of the Middle Ages and in early modern times, and protected their members from oppression in an age when oppression was the rule. With the revival of trade and industry craft guilds arose all over western Europe. One of the first of these was the candle-makers' guild, organized at Paris in 1061. Soon after we find large numbers of guilds — masons, shoemakers, harness-makers, bakers, smiths, wool-combers, tanners, saddlers, spurriers, weavers, goldsmiths, pewterers, carpenters, leather-workers, cloth-workers, pinners, fishmongers, butchers, barbers — all organized on much the same plan. These were the working-men's fraternities or labor unions of mediæval Europe. Each trade or craft became organized as a city guild, composed of the "masters," "journeymen" (paid workmen), and "apprentices." The great mediæval document, a charter of rights guaranteeing protection, was usually obtained. The guild for each trade laid down rules for the

[1] In Hamburg, for example, the city council established four writing schools in 1402, to which the church authorities objected. The council refused to give them up, and for this was laid under the ban of the Church, compelled to recede, admit that it had no right to establish such schools, and pay the costs involved in the contest.

[2] For example, the three most widely read books of the thirteenth century were *Reynard the Fox*, a profoundly humorous animal epic; *The Golden Legend*, which so deeply impressed Longfellow; and the *Romance of the Rose*, for three centuries the most read book in Europe.

[3] Despite all the criticisms one may offer against business, commerce has always been a great civilizing force. While not anxious to pay heavy taxes, the merchant has always been willing to pay what has been necessary to support a public power capable of maintaining order and security for property. Feudal turmoil, private warfare, and plundering are deadly foes of commerce, and these have come to an end where commerce and industry have gained the ascendant.

number and training of apprentices,[1] the conditions under which a "journeyman" could become a "master," [2] rules for conducting the trade, standards to be maintained in workmanship, prices to be charged, and dues and obligations of members (**R. 97**). They supervised work in their craft, cared for the sick, buried the dead, and looked after the widows and orphans. Often they provided one or more priests of their own to minister to the families of their craft, and gradually the custom arose of having the priest also teach something of the rudiments of religion and learning to the children of the members. In time money and lands were set aside or left for such purposes, and a form of chantry school, which later evolved into a regular school, often with instruction in higher studies added, was created for the children of members[3] of the guild (**R. 98**).

Apprenticeship education. For centuries after the revival of trade and industry all manufacturing was on a small scale, and in the home-industry stage. There was, of course, no machinery, and only the simple tools known from ancient times were used. In a first-floor room at the back, master, journeymen, and apprentices working together made the articles which were sold by the master or the master's wife and daughter in the room in front. The manufacturer and merchant were one. Apprentices were bound to a master for a term of years (**R. 99**), often paying for the training and education to be received, and the master boarded and lodged both the apprentices and the paid workmen in the family rooms above the shop and store.

The form of apprenticeship education and training which thus developed, from an educational point of view, forms for us the important feature of the history of these craft guilds. With the subdivision of labor and the development of new trades the craft-guild idea was extended to the new occupations, and a steady stream of rural labor flowing to the towns was absorbed by them and taught the elements of social usages, self-government, and

[1] As a rule a master craftsman might teach his trade to all his sons, but could have only one other apprentice who received board, lodging, clothing, and training, as one of the family. The guild still supervised the apprentice, protecting him from bad usage or defective training by the master.

[2] This required the production of a "masterpiece." This piece of work had to be produced to prove high competency. For example, in the shoemakers' guild of Paris, a pair of boots, three pairs of shoes, and a pair of slippers, all done in the best possible manner, were required.

[3] Of thirty-three guilds investigated by Leach, all maintained song schools, and twenty-eight maintained a grammar school as well. In London, Merchant Taylors' School, Stationers' School, and the Mercers' School are present-day survivals of these ancient guild foundations.

the mastery of a trade. Throughout all the long period up to the nineteenth century this apprenticeship education in a trade and in self-government constituted almost the entire formal education the worker with his hands received. The sons of the barbarian invaders, as well as their knightly brothers, at last were busy learning the great lessons of industry, coöperation, and personal loyalty. Here begins, for western Europe, "the nobility of labor — the long pedigree of toil." So well in fact did this apprentice system of training and education meet the needs of the time that it persisted, as was said above, well into the nineteenth century (**Rs. 200, 201, 242, 243**), being displaced only by modern power machinery and systematized factory methods. During the later Middle Ages and in modern times it rendered an important educational service; in the later nineteenth century it became such an obstacle to educational and industrial progress that it has had to be supplemented or replaced by systematic vocational education.

Influence of these new movements. We thus see, by the end of the twelfth century, a number of new influences in western Europe which point to an intellectual awakening and to the rise of a new educated class, separate from the monks and clergy on the one hand or the nobility on the other, and to the awakening of Europe to a new attitude toward life. Saracen learning, filtering across from Spain, had added materially to the knowledge Europe previously had, and had stimulated new intellectual interests. Scholasticism had begun its great work of reorganizing and systematizing theology, which was destined to free philosophy, hitherto regarded as a dangerous foe or a suspected ally, from theology and to remake entirely the teaching of the subject. Civil and canon law had been created as wholly new professional subjects, and the beginnings of the teaching of medicine had been made. Instead of the old Seven Liberal Arts and a very limited course of professional study for the clerical office being the entire curriculum, and Theology the one professional subject, we now find, by the beginning of the thirteenth century, a number of new and important professional subjects of large future significance — subjects destined to break the monopoly of theological study and put an end to logistic hair-splitting. The next step in the history of education came in the development of institutions where thinking and teaching could be carried on free from civil or ecclesiastical control, with the consequent rise of an independent learned class

in western Europe. This came with the rise of the universities, to which we next turn, and out of which in time arose the future independent scholarship of Europe, America, and the world in general.

We also discover a series of new movements, connected with the Crusades, the rise of cities, and the revival of trade and industry, all of which clearly mark the close of the dark period of the Middle Ages. We note, too, the evolution of new social classes — a new Estate — destined in time to eclipse in importance both priest and noble and to become for long the ruling classes of the modern world. We also note the beginnings of an important independent system of education for the hand-workers which sufficed until the days of steam, machinery, and the evolution of the factory system. The eleventh and twelfth centuries were turning-points of great significance in the history of our western civilization, and with the opening of the wonderful thirteenth century the western world is well headed toward a new life and modern ways of thinking.

QUESTIONS FOR DISCUSSION

1. Why is it that a strong religious control is never favorable to originality in thinking?
2. Show how the work of the Nestorian Christians for the Mohammedan faith was another example of the Hellenization of the ancient world.
3. Would it be possible for any people anywhere in the world to-day to make such advances as were made at Bagdad, in the late eighth and early ninth centuries, without such work permanently influencing the course of civilization and learning everywhere? To what is the difference due?
4. What were the chief obstacles to Europe adopting at once the learning from Mohammedan Spain, instead of waiting centuries to discover this learning independently?
5. Why did Aristotle's work seem of much greater value to the mediæval scholar than the Moslem science? What are the relative values to-day?
6. Why should the light literature of Spain be spoken of as a gay contagion? Did this Christian attitude toward fiction and poetry continue long?
7. In what ways was the *Sic et Non* of Abelard a complete break with mediæval traditions?
8. How did the fact that Dialectic (Logic) now became the great subject of study in itself denote a marked intellectual advance? What was the significance of the prominence of this study for the future of thinking?
9. What was the effect on inquiry and individual thinking of the method of presentation used by Saint Thomas Aquinas in his *Summa Theologica?*
10. How do you explain the all-absorbing interest in scholasticism during the greater part of a century?
11. State the significance, for the future, of the revival of the study of Roman law: (*a*) intellectually; (*b*) in shaping future civilization.
12. How do you explain the Christian attitude toward disease, and the

scientific treatment of it? Has that attitude entirely passed away? Illustrate.

13. Why was it such a good thing for the future of civilization in England and France that so many of its nobility perished in the Crusades?
14. State a number of ways in which the Crusade movements had a beneficial effect on western Europe.
15. Show how the revival of commerce was an educative and a civilizing influence of large importance.
16. Would the organization of commerce and banking, and the establishment of the sanctity of obligations in a country, be one important measure of the civilization to which that country had attained? Illustrate.
17. Show how the development of industry and commerce and the accumulation of wealth tend to promote order and security, and to extend educational advantages.
18. Contrast a mediæval guild and a modern labor union. A guild and a modern fraternal and benevolent society.
19. Why did apprenticeship education continue so long with so little change, when it is now so rapidly being superseded?
20. Does the rise of a new Estate in society indicate a period of slow or rapid change? Why is such an evolution of importance for education and civilization?

SELECTED READINGS

In the accompanying *Book of Readings* the following selections are reproduced:

85. Draper: The Moslem Civilization in Spain.
86. Draper: Learning among the Moslems in Spain.
87. Norton: Works of Aristotle known by 1300.
88. Averroës: On Aristotle's Greatness.
89. Roger Bacon: How Aristotle was received at Oxford.
90. Statutes: How Aristotle was received at Paris.
 (*a*) Decree of Church Council, 1210 A.D.
 (*b*) Statutes of Papal Legate, 1215 A.D.
 (*c*) Statutes of Pope Gregory, 1231 A.D.
 (*d*) Statutes of the Masters of Arts, 1254 A.D.
91. Cousin: Abelard's *Sic et Non*.
 (*a*) From the Introduction.
 (*b*) Types of Questions raised for Debate.
92. Rashdall: The Great Work of the Schoolmen.
93. Justinian: Preface to the Justinian Code.
94. Giry and Réville: The Early Mediæval Town.
 (*a*) To the Eleventh Century.
 (*b*) By the Thirteenth Century.
95. Gross: An English Town Charter.
96. London: Oath of a New Freeman in a Mediæval Town.
97. Riley: Ordinances of the White-Tawyers' Guild.
98. State Report: School of the Guild of Saint Nicholas.
99. England, 1396: A Mediæval Indenture of Apprenticeship.

QUESTIONS ON THE READINGS

1. Contrast the state of civilization in Spain and the rest of Europe about 1100 (**85, 86**).
2. Considering Aristotle's great intellectual worth (**88**) and work (**87**), is it to be wondered that the mediævals regarded him with such reverence?

3. Do we to-day accept Abelard's premise (**91 a**) as to attaining wisdom? Would his questions (**91 b**) excite much interest to-day?
4. How do you explain the change in attitude toward him shown by the successive statutes enacted (**90 a-d**) for the University of Paris?
5. Would the extract from Roger Bacon (**89**) lead you to think him a man ahead of the times in which he lived? Why?
6. Did scholasticism represent the innocent intellectual activity, from the Church point of view, pictured by Rashdall (**92**)?
7. What were the main things Justinian hoped to accomplish by the preparation of the great *Code*, as set forth in the Preface (**93**)?
8. Characterize the mediæval town by the eleventh century (**94 a**). What was the nature of the progress from that time to the thirteenth century (**94 b**)?
9. What were the chief privileges contained in the town charter of Wallingford (**95**), and what position does it indicate was held by the guild-merchant therein?
10. What does the oath of a freeman (**96**) indicate as to social conditions?
11. State the chief regulations imposed on its members by the White-Tawyers' Guild (**97**). Compare these regulations with those of a modern labor union, such as the plumbers. With a fraternal order, such as the Masons.
12. What is indicated as to the educational advantages provided by the Guild of Saint Nicholas, in the city of Worcester, by the extract (**98**) taken from the Report of the King's Commissioner?
13. Does a comparison of Readings **99**, **201**, and **242** indicate a static condition of apprenticeship education for centuries?

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CHAPTER IX

THE RISE OF THE UNIVERSITIES

Evolution of the *Studium Generale*. In the preceding chapter we described briefly the new movement toward association which characterized the eleventh and the twelfth centuries — the municipal movement, the merchant guilds, the trade guilds, etc. These were doing for civil life what monasticism had earlier done for the religious life. They were collections of like-minded men, who united themselves into associations or guilds for mutual benefit, protection, advancement, and self-government within the limits of their city, business, trade, or occupation. This tendency toward association, in the days when state government was weak or in its infancy, was one of the marked features of the transition time from the early period of the Middle Ages, when the Church was virtually the State, to the later period of the Middle Ages, when the authority of the Church in secular matters was beginning to weaken, modern nations were beginning to form, and an interest in worldly affairs was beginning to replace the previous inordinate interest in the world to come.

We also noted in the preceding chapters that certain cathedral and monastery schools, but especially the cathedral schools,[1] stimulated by the new interest in Dialectic, were developing into much more than local teaching institutions designed to afford a supply of priests of some little education for the parishes of the bishopric. Once York and later Canterbury, in England, had had teachers who attracted students from other bishoprics. Paris had for long been a famous center for the study of the Liberal Arts and of Theology. Saint Gall had become noted for its music. Theologians coming from Paris (1167–68) had given a new impetus to study among the monks at Oxford. A series of political events in northern Italy had given emphasis to the study of law in many cities, and the Moslems in Spain had stimulated the schools there and in southern France to a study of medicine and Aristotelian science. Rome was for long a noted center for study. Gradually these places came to be known as *studia publica*, or *studia generalia*, meaning by this a generally recognized place of

[1] By the twelfth century the cathedral schools had passed the monastic schools in importance, and had obtained a lead which they were ever after to retain (R. 71).

study, where lectures were open to any one, to students of all countries and of all conditions.[1] Traveling students came to these places from afar to hear some noted teacher read and comment on the famous textbooks of the time.

From the first both teachers and students had been considered as members of the clergy, and hence had enjoyed the privileges and immunities extended to that class, but, now that the students were becoming so numerous and were traveling so far, some additional grant of protection was felt to be desirable. Accordingly the Emperor Frederick Barbarossa,[2] in 1158, issued a general proclamation of privileges and protection (**R. 101**). In this he ordered that teachers and students traveling "to the places in which the studies are carried on" should be protected from unjust arrest, should be permitted to "dwell in security," and in case of suit should be tried "before their professors or the bishop of the city." This document marks the beginning of a long series of rights and privileges granted to the teachers and students of the universities now in process of evolution in western Europe.

The university evolution. The development of a university out of a cathedral or some other form of school represented, in the Middle Ages, a long local evolution. Universities were not founded then as they are to-day. A teacher of some reputation drew around him a constantly increasing body of students. Other teachers of ability, finding a student body already there, also "set up their chairs" and began to teach. Other teachers and more students came. In this way a *studium* was created. About these teachers in time collected other university servants — "bedells, librarians, lower officials, preparers of parchment, scribes, illuminators of parchment, and others who serve it," as Count Rupert enumerated them in the Charter of Foundation granted, in 1386, to Heidelberg (**R. 103**). At Salerno, as we have already seen (p. 199), medical instruction arose around the work of Constantine of Carthage and the medicinal springs found in the vicinity. Students journeyed there from many lands, and licenses to practice the medical art were granted there as early as 1137. At Bologna, we have also seen (p. 195), the work of Irnerius and Gratian early made this a great center for the study of civil and canon law, and their pupils spread the taste for these

[1] As contrasted with the monasteries, which were under a "Rule." The opportunities offered by such open institutions in the Middle Ages can hardly be overestimated.

[2] Frederick I, of the mediæval Holy Roman Empire of Germany and Italy.

new subjects throughout Europe. Paris for two centuries had been a center for the study of the Arts and of Theology, and a succession of famous teachers — William of Champeaux, Abelard, Peter the Lombard — had taught there. So important was the theological teaching there that Paris has been termed "the Sinai of instruction" of the Middle Ages.

By the beginning of the thirteenth century both students and teachers had become so numerous, at a number of places in western Europe, that they began to adopt the favorite mediæval practice and organized themselves into associations, or guilds, for further protection from extortion and oppression and for greater freedom from regulation by the Church. They now sought and obtained additional privileges for themselves, and, in particular, the great mediæval document — a charter of rights and privileges.[1] As both teachers and students were for long regarded as *clerici* the charters were usually sought from the Pope, but in some cases they were obtained from the king.[2] These associations of scholars, or teachers, or both, "born of the need of companionship which men who cultivate their intelligence feel," sought to perform the same functions for those who studied and taught that the merchant and craft guilds were performing for their members. The ruling idea was association for protection, and to secure freedom for discussion and study; the obtaining of corporate rights and responsibilities; and the organization of a system of apprenticeship, based on study and developing through journeyman into mastership,[3] as attested by an examination and the license to teach. In the rise of these teacher and student guilds[4] we have the beginnings of the universities of western Europe, and their organization into chartered teaching groups (**R. 100**) was simply

[1] "No individual during the Middle Ages was secure in his rights, even of life or property, certainly not in the enjoyment of ordinary freedom, unless protected by specific guarantees secured from some organization. Politically, one must owe allegiance to some feudal lord from whom protection was received; economically, one must secure his rights through merchant or craft guild; intellectual interests and educational activities were secured and controlled by the Church." (Monroe, P., *Text Book in the History of Education*, p. 317.)

[2] At first the older institutions organized themselves without charter, securing this later, while the institutions founded after 1300 usually began with a charter from pope or king, and sometimes from both (**R. 100**).

[3] The degree of master was originally the license to practice the teaching trade, and analogous to a master shoemaker, goldsmith, or other master craftsmen.

[4] "The universities, then, at their origins, were merely academic associations, analogous, as societies of mutual guaranty, to the corporations of working men, the commercial leagues, the trade-guilds which were playing so great a part at the same epoch; analogous also, by the privileges granted to them, to the municipal associations and political communities that date from the same time." (Compayre, G., *Abelard and the Rise of the Universities*, p. 33.)

reprisals from the city, many of the masters and students went to the studium towns of Angers, Orleans, and Rheims, and universities were established at the first two. Migrations from Prague helped establish many of the German universities. In this way the university organization was spread over Europe. In 1200 there were but six *studia generalia* which can be considered as having evolved into universities — Salerno, Bologna, and Reggio, in Italy; Paris and Montpellier, in France; and Oxford, in England. By 1300 eight more had evolved in Italy, three more in France, Cambridge in England, and five in Spain and Portugal. By 1400 twenty-two additional universities had developed, five of which were in German lands, and by 1500 thirty-five more had been founded, making a total of eighty. By 1600 the total had been raised to one hundred and eight (**R. 100,** for list by countries, dates, and method of founding). Some of these (approximately thirty) afterwards died, while in the following centuries additional ones were created.[1]

Privileges and immunities granted. The grant of privileges to physicians and teachers made by the Emperor Constantine, in 333 A.D. (**R. 26**), and the privileges and immunities granted to the clergy (*clerici*) by the early Christian Roman Emperors (**R. 38**), doubtless formed a basis for the many grants of special privileges made to the professors and students in the early universities. The document promulgated by Frederick Barbarossa, in 1158 (**R. 101**), began the granting of privileges to the *studia generalia*, and this was followed by numerous other grants. The grant to students of freedom from trial by the city authorities, and the obligation of every citizen of Paris to seize any one seen striking a student, granted by Philip Augustus, in 1200 (**R. 102**), is another example, widely followed, of the bestowal of large privileges. Count Rupert I, in founding the University of Heidelberg, in 1386, granted many privileges, exempted the students from "any duty, levy, imposts, tolls, excises, or other exactions whatever" while coming to, studying at, or returning home from the university (**R. 103**). The exemption from taxation (**R. 104**) became a matter of form, and was afterwards followed in the

[1] Between 1600 and 1700, although most of the cities capable of supporting universities were provided with them, twenty-one more were created, chiefly in Germany and Holland. The first American university (Harvard) was established in 1636, and the second (Yale) in 1702. In the eighteenth and nineteenth centuries, without counting the United States or any western-hemisphere country, forty more were created. Among the important nineteenth-century creations were Berlin, 1810; Christiana, 1811; St. Petersburg, 1819; Brussels, 1834; London, 1836; and Athens, *1836.*

chartering of American colleges (**R. 187**). Exemption from military service also was granted.

So valuable an asset was a university to a city, and so easy was it for a university to move almost overnight, that cities often, and at times even nations, encouraged not only the founding of universities, but also the migration of both faculties and students. An interesting case of a city bidding for the presence of a university is that of Vercelli (**R. 105**), which made a binding agreement, as a part of the city charter, whereby the city agreed with a body of masters and students "swarming" from Padua to loan the students money at lower than the regular rates, to see that there was plenty of food in the markets at no increase in prices, and to protect the students from injustice. An instance of bidding by a State is the case of Cambridge, which obtained quite an addition by the coming of striking Paris masters and students in 1229, in response to the pledge of King Henry III (**R. 109**), who "humbly sympathized with them for their sufferings at Paris," and promised them that if they would come "to our kingdom of England and remain there to study" he would assign to them "cities, boroughs, towns, whatsoever you may wish to select, and in every fitting way will cause you to rejoice in a state of liberty and tranquillity."

One of the most important privileges which the universities early obtained, and a rather singular one at that, was the right of *cessatio*, which meant the right to stop lectures and go on a strike as a means of enforcing a redress of grievances against either town or church authority (**R. 107**). This right was for long jealously guarded by the university, and frequently used to defend itself from the smallest encroachments on its freedom to teach, study, and discipline the members of its guild as it saw fit, and often the right not to discipline them at all. Often the *cessatio* was invoked on very trivial grounds, as in the case of the Oxford *cessatio* of 1209 (**R. 108**), the Paris *cessatio* of 1229 (**R. 109**), and the numerous other *cessationes* which for two centuries[1] repeatedly disturbed the continuity of instruction at Paris.

Degrees in the guild. The most important of the university rights, however, was the right to examine and license its own teachers (**R. 110**), and to grant the license to teach (**Rs. 111, 112**). Founded as the universities were after the guild model, they were primarily places for the taking of apprentices in the Arts, devel-

[1] See Compayre, G., *Abelard*, pp. 87–90 for list of these "strikes."

oping them into journeymen and masters, and certifying to their proficiency in the teaching craft.[1] Their purpose at first was to prepare teachers, and the giving of instruction to students for cultural ends, or a professional training for practical use aside from teaching the subject, was a later development.

Accordingly it came about in time that, after a number of years of study in the Arts under some master, a student was permitted to present himself for a test as to his ability to define words, determine the meaning of phrases, and read the ordinary Latin texts in Grammar, Rhetoric, and Logic (the *Trivium*), to the satisfaction of other masters than his own. In England this test came to be known by the term *determine*. Its passage was equivalent to advancing from apprenticeship to the ranks of a journeyman, and the successful candidate might now be permitted to assist the master, or even give some elementary instruction himself while continuing his studies. He now became an assistant or companion, and by the fourteenth century was known as a *baccalaureus*, a term used in the Church, in chivalry, and in the guilds, and which meant a *beginner*. There was at first, though, no thought of establishing an examination and a new degree for the completion of this first step in studies. The bachelor's degree was a later development, sought at first by those not intending to teach, and eventually erected into a separate degree.

When the student had finally heard a sufficient number of courses, as required by the statutes of his guild, he might present himself for examination for the teaching license. This was a public trial, and took the form of a public disputation on some stated thesis, in the presence of the masters, and against all comers. It was the student's "masterpiece," analogous to the masterpiece of any other guild, and he submitted it to a jury of the masters of his craft.[2] Upon his masterpiece being adjudged

[1] "It is impossible to fix the period at which the system of degrees began to be organized. Things were done slowly. At the outset, and until towards the end of the twelfth century, there existed nothing resembling a real conferring of degrees in the rising universities. In order to teach it was necessary to have a respondent, a master authorized by age and knowledge. . . .

"The 'license to teach,' nevertheless, became by slow degrees, as master and pupils multiplied, a preliminary condition of teaching, a sort of diploma more and more requisite, and of which the bishops (or their representatives, the chancellors) were the dispensers. Up to the fourteenth century there was hardly any other clearly-defined university title." (Compayre, G., *Abelard*, pp. 142–43.)

[2] "It is manifest that the universities borrowed from the industrial corporations their 'companionships,' their 'masterships,' and even their banquets; a great repast being the ordinary sequel of the reception of the baccalaureate or doctorate." (Compayré, G., *Abelard*, p. 141.)

satisfactory, he also became a master in his craft, was now able to define and dispute, was formally admitted to the highest rank in the teaching guild, might have a seal, and was variously known as master, doctor, or professor, all of which were once synonymous terms.[1] If he wished to prepare himself for teaching one of the professional subjects he studied still further, usually for a number of years, in one of the professional faculties, and in time he was declared to be a Doctor of Law, or Medicine, or of Theology.



FIG. 62. SEAL OF A DOCTOR, UNIVERSITY OF PARIS

The teaching faculties. The students for a long time grouped themselves for better protection (and aggression) according to the nation from which they came,[2] and each "nation" elected a *councilor* to look after the interests of its members. Between the different nations there were constant quarrels, insults were passed back and forth, and much bad blood engendered.[3] On the side of the masters the organization was by teaching subjects,

[1] The term professor has become general in its significance, and is used in all countries. In England the term master was retained for the higher degree, while in Germany the term doctor was retained, and the doctorate made their one degree. American followed the English plan in the establishment of the early colleges, and the degree of A.B. and A.M. were provided for. Later, when the German university influence became prominent in the United States, the doctor's degree was superimposed on the English plan.

[2] At Paris, for example, there were four nations — France, Picardy, Normandy, and England. These were again divided into tribes, as for example, there were five tribes of the French — Paris, Sens, Rheims, Tours, and Bourges. Orleans had ten nations — France, Germany, Lorraine, Burgundy, Champagne, Picardy, Normandy, Touraine, Guyenne, and Scotland. In those days these represented separate nationalities, who little understood one another, and carried their constant quarrels up to the very lecture benches of the professors.

[3] A contemporary writer. Jacobus de Vitriaco, has left us an account of student life at Paris, in which he says:

"The students at Paris wrangled and disputed not merely about the various sects or about some discussions; but the differences between the countries also caused dissensions, hatreds and virulent animosities among them, and they impudently uttered all kinds of affronts and insults against one another.

"They affirmed that the English were drunkards and had tails; the sons of France proud, effeminate and carefully adorned like women. They said that the Germans were furious and obscene at their feasts; the Normans vain and boastful; the Poitevins traitors and always adventurers. The Burgundians they considered vulgar and stupid. The Bretons were reputed to be fickle and changeable, and were often reproached for the death of Arthur. The Lombards were called avaricious, vicious and cowardly; the Romans, seditious, turbulent and slanderous; the Sicilians, tyrannical and cruel; the inhabitants of Brabant, men of blood, incendiaries, brigands and ravishers; the Flemish, fickle, prodigal, gluttonous, yielding as butter, and slothful. After such insults from words they often came to blows." (Pa. Trans. and Repts. from *Sources*, vol. II, no. 3, pp. 19–20.)

and into what came to be known as *faculties*.[1] Thus there came to be four faculties in a fully organized mediæval university, representing the four great divisions of knowledge which had been evolved — Arts, Law, Medicine, and Theology. Each faculty elected a *dean*, and the deans and councilors elected a *rector*, who was the head or president of the university. The *chancellor*, the successor of the cathedral school *scholasticus*, was usually appointed by the Pope and represented the Church, and a long struggle ensued between the rector and the chancellor to see who should be the chief authority in the university. The rector was ultimately victorious, and the position of chancellor became largely an honorary position of no real importance.

The Arts Faculty was the successor of the old cathedral-school instruction in the Seven Liberal Arts, and was found in practically all the universities. The Law Faculty embraced civil and canon law, as worked out at Bologna. The Medical Faculty taught the knowledge of the medical art, as worked out at Salerno and Montpellier. The Theological Faculty, the most important of the four, prepared learned men for the service of the Church, and was for some two centuries controlled by the scholastics. The Arts Faculty was preparatory to the other three. As Latin was the language of the classroom, and all the texts were Latin texts, a reading and speaking knowledge of Latin was necessary before coming to the university to study. This was obtained from a study of the first of the Seven Arts — Grammar — in some monastery, cathedral, or other type of



FIG. 63. NEW COLLEGE, AT OXFORD

One of the oldest of the Oxford colleges, having been founded in 1379. The picture shows the chapel, cloisters (consecrated in 1400), and a tall tower, once forming a part of the Oxford city walls. Note the similarity of this early college to a monastery, as in Plate I.

[1] In an American university the term *college* or *school* has largely replaced the term *faculty;* in Europe the term *faculty* is still used. Thus we say College of Liberal Arts, or School of Law, instead of Faculty of Arts, etc.

school. Thus a knowledge of Latin formed practically the sole requirement for admission to the mediæval university, and continued to be the chief admission requirement in our universities up to the nineteenth century (**R. 186 a**). In Europe it is still of great importance as a preparatory subject, but in South American countries it is not required at all.

Very few of the universities, in the beginning, had all four of these faculties. The very nature of the evolution of the earlier ones precluded this. Thus Bologna had developed into a *studium generale* from its prominence in law, and was virtually constituted a university in 1158, but it did not add Medicine until 1316, or Theology until 1360. Paris began sometime before 1200 as an arts school, Theology with some instruction in Canon Law was added by 1208, a Law Faculty in 1271, and a Medical Faculty in 1274. Montpellier began as a medical school sometime in the twelfth century. Law followed a little later, a teacher from Bologna "setting up his chair" there. Arts was organized by 1242. A sort of theological school began in 1263, but it was not chartered as a faculty until 1421. So it was with many of the early universities. These four traditional faculties were well established by the fourteenth century, and continued as the typical form of university organization until modern times. With the great university development and the great multiplication of subjects of study which characterized the nineteenth century, many new faculties and schools and colleges have had to be created, particularly in the United States, in response to new modern demands.[1]

Nature of the instruction. The teaching material in each faculty was much as we have already indicated. After the recovery of the works of Aristotle he came to dominate the instruction in the Faculty of Arts.[2] The Statutes of Paris, in 1254, giving the

[1] For example, one of our modern state universities is organized into the following faculties, schools, and colleges: (1) college of liberal arts; (2) school of medicine; (3) school of law; (4) school of fine arts; (5) school of pure science; (6) college of engineering; (7) college of agriculture; (8) school of history, economics, and social sciences; (9) school of business administration; (10) college of education; (11) school of household arts; (12) school of pharmacy; (13) school of veterinary medicine; (14) school of library science; (15) school of forestry; (16) school of sanitary engineering; (17) the graduate school; and (18) the university-extension division.

[2] "He was called 'The Philosopher'; and so fully were scholars convinced that it had pleased God to permit Aristotle to say the last word upon each and every branch of knowledge that they humbly accepted him, along with the Bible, the church fathers, and the canon and Roman law, as one of the unquestioned authorities which together formed a complete guide for humanity in conduct and in every branch of science." (Robinson, J. H., *History of Western Europe*, p. 272.)

books to be read for the A.B. and the A.M. degrees (**R. 113**), show how fully Aristotle had been adopted there as the basis for instruction in Logic, Ethics, and Natural Philosophy by that time. The books required for these two degrees at Leipzig, in 1410 (**R. 114**), show a much better-balanced course of instruction, though the time requirements given for each subject show how largely Aristotle predominated there also. Oxford (**R. 115**) kept up better the traditions of the earlier Seven Liberal Arts in its requirements, and classified the new works of Aristotle in three additional "philosophies" — natural, moral, and metaphysical. From four to seven years were required to complete the arts course, though the tendency was to reduce the length of the arts course as secondary schools below the university were evolved.[1]

In the Law Faculty, after Theology the largest and most important of all the faculties in the mediæval university, the *Corpus Juris Civilis* of Justinian (p. 195) and the *Decretum* of Gratian (p. 196) were the textbooks read, with perhaps a little more practical work in discussion than in Arts or Medicine. The Oxford course of study in both Civil and Canon Law (**R. 116 b-c**) gives a good idea as to what was required for degrees in one of the best of the early law faculties.

In the Medical Faculty a variety of books — translations of Hippocrates (p. 197), Galen (p. 198), Avicenna (p. 198), and the works of certain writers at Salerno and Jewish and Moslem writers in Spain — were read and lectured on. The list of medical books used at Montpellier,[2] in 1340, which at that time was the foremost place for medical instruction in western Europe, shows the book-nature and the extent of the instruction given at the leading school of medicine of the time. It was, moreover, customary at Montpellier for the senior students to spend a summer in visiting the sick and doing practical work. We have here the

[1] This tendency increased with time, due both to the development of secondary schools which could give part of the preparation, and to the increasing number of students who came to the university for cultural or professional ends and without intending to pass the tests for the mastership and the license to teach. Finally the arts course was reduced to three or four years (the usual college course), and the master's degree to one, and for the latter even residence was waived during the middle of the nineteenth century. The A.M. degree has recently been rehabilitated and now usually signifies a year of hard study in English and American universities, though a few eastern American institutions still play with it or even grant it as an honorary degree. In Germany the arts course disappeared, being given to the secondary schools entirely in the late eighteenth century, and the universities now confer only the degree of doctor.

[2] *For a list of the books* used in the faculty of medicine at Montpellier, in 1340, *see Rashdall, H., Universities of Europe in the* Middle Ages, vol. II, pt. I, p. 123; pt. II, *p. 780.*

merest beginnings of clinical instruction and hospital service, and at this stage medical instruction remained until quite modern times. The medical courses at Paris (**R. 117**) and Oxford (**R. 116 d**) were less satisfactory, only book instruction being required.



FIG. 64. A LECTURE ON CIVIL LAW BY GUILLAUME BENEDICTI
(After a sixteenth-century wood engraving, now in the National Library, Paris, Cabinet of Designs)

Both Law and Medicine were so dominated by the scholastic ideal and methods that neither accomplished what might have been possible in a freer atmosphere.

In the Theological Faculty the *Sentences* of Peter Lombard (p. 189) and the *Summa Theologiæ* of Thomas Aquinas (p. 191) were the textbooks used. The Bible was at first also used somewhat, but later came to be largely overshadowed by the other books and by philosophical discussions and debates on all kinds of hair-splitting questions, kept carefully within the limits prescribed by the Church. The requirements at Oxford (**R. 116 a**) give the course of instruction in one of the best of the theological faculties of the time. The teachers were scholastics, and scholastic methods and ideals everywhere prevailed. Roger Bacon's (1214–1294) criticism of this type of theological study (**R. 118**), which he calls "horse loads, not at all [in consonance] with the most holy text of God," and "philosophical, both in substance and method," gives an idea of the kind of instruction which came



a loan collection of theological books for poor students we find, in 1271, a gift by will to the University of Paris (R. 119) of a private library, containing twenty-seven books. Even if the students possessed books, the master "read" [1] and commented from his "gloss" at great length on the texts being studied. Besides the mere text each teacher had a "gloss" or commentary for it — that is, a mass of explanatory notes, summaries, cross-references, opinions by others, and objections to the statements of the text. The "gloss" was a book in itself, often larger than the text, and these standard glosses,[2] or commentaries, were used in the university instruction for centuries. In Theology and Canon Law they were particularly extensive.

All instruction, too, was in Latin. The professor read from the Latin text and gloss, repeating as necessary, and to this the student listened. Sometimes he read so slowly that the text could be copied, but in 1355 this method was prohibited at Paris (R. 121), and students who tried to force the masters to follow it "by shouting or whistling or raising a din, or by throwing stones," were to be suspended for a year. The first step in the instruction was a minute and subtle analysis of the text itself, in which each line was dissected, analyzed, and paraphrased, and the comments on the text by various authors were set forth. Next all passages capable of two interpretations were thrown into the form of a question; *pro* and *contra*, after the manner of Abelard. The arguments on each side were advanced, and the lecturer's conclusion set forth and defended. The text was thus worked over day after day in minute detail. Having as yet but little to teach, the masters made the most of what they had. A good example of the mediæval plan of university instruction is found in the announcement of Odofredus, a distinguished teacher of Law at Bologna, about the middle of the thirteenth century, which Rashdall thinks

as could be done, and writing the new book crosswise of the page. In this way the expense for parchment was reduced, and in the process many valueless and a few valuable books were destroyed. Still, the cost for books during the days of parchment must have been high. Walsh estimates that "an ordinary folio volume probably cost from 400 to 500 francs in our [1914] values, that is, between $80 and $100."

[1] In Germany the old mediæval expression has been retained, and the announcements of instruction there still state that the professor will "read" on such and such subjects, instead of "offer courses," as we say in the United States.

[2] Norton, in his *Readings in the History of Education; Mediæval Universities*, pp. 59–75, gives an extract from a text (Gratian) and "gloss" by various writers, on the question — "Shall Priests be Acquainted with Profane Literature, or No?" which see for a good example of mediæval university instruction and the manner in which a small amount of knowledge was spun out by means of a gloss.

is equally applicable to methods in other subjects. Odofredus says:

> First, I shall give you summaries of each title before I proceed to the text; secondly, I shall give you as clear and explicit a statement as I can of the purport of each Law (included in the title); thirdly, I shall read the text with a view to correcting it; fourthly, I shall briefly repeat the contents of the Law; fifthly, I shall solve apparent contradictions, adding any general principles of Law (to be extracted from the passage), and any distinctions and subtle and useful problems arising out of the Law with their solutions, as far as the Divine Providence shall enable me. And if any Law shall seem deserving, by reason of its celebrity or difficulty, of a Repetition, I shall reserve it for an evening Repetition.

It will be seen that both students and professors were bound to the text, as were the teachers of the Seven Liberal Arts in the cathedral schools before them. There was no appeal to the imagination, still less to observation, experiment, or experience. Each generation taught what it had learned, except that from time to time some thinker made a new organization, or some new body of knowledge was unearthed and added.

Another method much used was the debate, or disputation, and participation in a number of these was required for degrees (**R. 116**). These disputations were logical contests, not unlike a modern debate, in which the students took sides, cited authorities, and summarized arguments, all in Latin. Sometimes a student gave an exhibition in which he debated both sides of a question, and summarized the argument, after the manner of the professors. As a corrective to the memorization of lectures and texts, these disputations served a useful purpose in awakening intellectual vigor and logical keenness. They were very popular until into the sixteenth century, when new subject-matter and new ways of thinking offered new opportunities for the exercise of the intellect.

In teaching equipment there was almost nothing at first, and but little for centuries to come. Laboratories, workshops, *gymnasia*, good buildings and classrooms — all alike were equally unknown. Time schedules of lectures (**Rs. 122, 123**) came in but slowly, in such matters each professor being a free lance. Nor were there any libraries at first, though in time these developed. For a long time books were both expensive and scarce (**Rs. 78, 119, 120**). After the invention of printing (first book printed in 1456), university libraries increased rapidly and soon became the *chief feature* of the university equipment. Figure 65 shows the *library of the University* of Leyden, in Holland, thirty-five years



FIG. 66. A UNIVERSITY DISPUTATION
(From Fick's *Auf Deutschland's Höhen Schulen*)

after its foundation, and about one hundred and fifty years after the beginnings of printing. It shows a rather large increase in the size of book collections [1] after the introduction of printing, and a good library organization.

[1] Not many early library catalogues have been preserved, but those which have all show small libraries before the days of printing. At Oxford, where the university was broken up into colleges, each of which had its own library, the following college libraries are known to have existed: Peterhouse College (1418), 304 volumes; Kings College (1453), 174 volumes; Queens College (1472), 199 volumes; University Library (1473), 330 volumes. The last two were just before the introduction of printing.

The Peterhouse library (1418) was classified as follows:

Subject	*Chained*	*Loanable*
Theology	61	63
Natural Philosophy	26	
Moral Philosophy	5	19
Metaphysics	3	
Logic	5	15
Grammar	6	13
Poetry	4	
Medicine	15	3
Civil Law	9	20
Canon Law	18	19
Totals	152	152

(*Clarke, J. W., The Care of Books*, pp. 145, 147.)

Value of the training given. Measured in terms of modern standards the instruction was undoubtedly poor, unnecessarily drawn out, and the educational value low. We could now teach as much information, and in a better manner, in but a fraction of the time then required. Viewed also by the standards of instruction in the higher schools of Greece and Rome the conditions were almost equally bad. Viewed, though, from the standpoint of what had prevailed in western Europe during the dark period

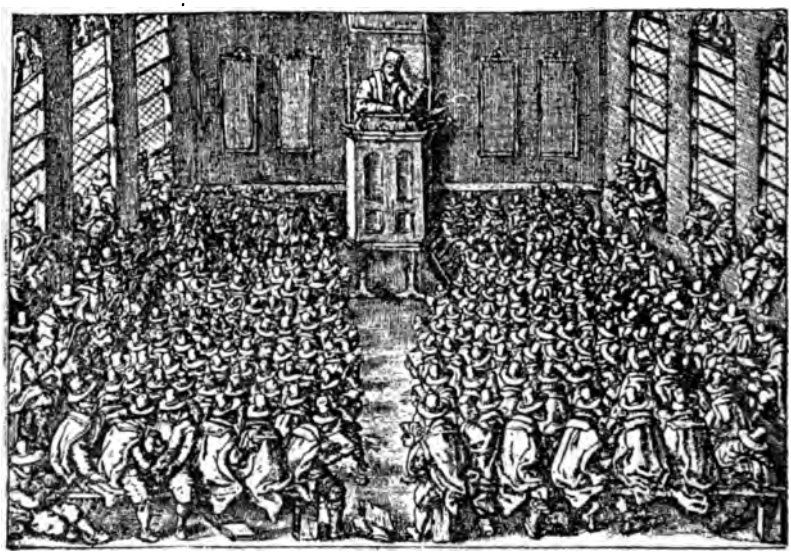


FIG. 67. A UNIVERSITY LECTURE AND LECTURE ROOM
(From a woodcut printed at Strassburg, 1608)

of the early Middle Ages, it represented a marked advance in method and content — except in pure literature, where there was an undoubted decline due to the absorbing interest in Dialectic — and it particularly marked a new spirit, as nearly critical as the times would allow. Despite the heterogeneous and but partially civilized student body, youthful and but poorly prepared for study, the drunkenness and fighting, the lack of books and equipment, the large classes and the poor teaching methods, and the small amount of knowledge which formed the grist for their mills and which they ground exceeding small, these new universities held within themselves, almost in embryo form, the largest promise for the intellectual future of western Europe which had ap-

peared since the days of the old universities of the Hellenic world (R. 124). In these new institutions knowledge was not only preserved and transmitted, but was in time to be tremendously advanced and extended. They were the first organizations to break the monopoly of the Church in learning and teaching; they were the centers to which all new knowledge gravitated; under their shadow thousands of young men found intellectual companionship and in their classrooms intellectual stimulation; and in encouraging "laborious subtlety, heroic industry, and intense application," even though on very limited subject-matter, and in training "men to think and work rather than to enjoy" (R. 124), they were preparing for the time when western Europe should awaken to the riches of Greece and Rome and to a new type of intellectual life of its own. From these beginnings the university organization has persisted and grown and expanded, and to-day stands, the Synagogue and the Catholic Church alone excepted, as the oldest organized institution of human society.

The manifest tendency of the universities toward speculation, though for long within limits approved by the Church, was ultimately to awaken inquiry, investigation, rational thinking, and to bring forth the modern spirit. The preservation and transmission of knowledge was by the university organization transferred from the monastery to the school, from monks to doctors, and from the Church to a body of logically trained men, only nominally members of the *clerici*. Their successors would in time entirely break away from connections with either Church or State, and stand forth as the independent thinkers and scholars in the arts, sciences, professions, and even in Theology. University graduates in Medicine would in time wage a long struggle against bigotry to lay the foundations of modern medicine. Graduates in Law would contend with kings and feudal lords for larger privileges for the as yet lowly common man, and would help to usher in a period of greater political equality. The university schools of Theology were in time to send forth the keenest critics of the practices of the Church. Out of the university cloisters were to come the men — Dante, Petrarch, Wycliffe, Huss, Luther, Calvin, Copernicus, Galileo, Newton — who were to usher in the modern spirit.

The universities as a public force. Almost from the first the universities availed themselves of their privileges and proclaimed a bold *independence.* *The* freedom from arrest and trial by the

civil authorities for petty offenses, or even for murder, and the right to go on a strike if in any way interfered with, were but beginnings in independence in an age when such independence seemed important. These rights were in time given up,[1] and in their place the much more important rights of liberty to study as truth seemed to lead, freedom in teaching as the master saw the truth, and the right to express themselves as an institution on public questions which seemed to concern them, were slowly but definitely taken on in place of the earlier privileges. Virtually a new type of members of society — a new Estate — was evolved, ranking with Church, State, and nobility, and this new Estate soon began to express itself in no uncertain tones on matters which concerned both Church and State. The universities were democratic in organization and became democratic in spirit, representing a heretofore unknown and unexpressed public opinion in western Europe. They did not wait to be asked; they gave their opinions unsolicited. "The authority of the University of Paris," writes one contemporary, "has risen to such a height that it is necessary to satisfy it, no matter on what conditions." The university "wanted to meddle with the government of the Pope, the King, and everything else," writes another. We find Paris intervening repeatedly in both church and state affairs,[2] and representing French nationality before it had come into being, as the so-called Holy Roman Empire represented the Germans, and the Papacy represented the Italians. In Montpellier, professors of Law were considered as knights, and after twenty years of practice they became counts. In Bologna we find the professors of Law one of the three assemblies of the city. Oxford, Cambridge, Paris, and the Scottish universities were given representation in Parliament. The German universities were from the first prominent in political affairs, and in the reformation struggle of the early sixteenth century they were the battle-grounds.

In an age of oppression these university organizations stood for freedom. In an age of force they began the substitution of reason. In the centuries from the end of the Dark Ages to the Reformation they were the homes of free thought. They early assumed national character and proclaimed a bold independence. Questions

[1] Survivals of these old privileges still exist in the German universities which exercise police jurisdiction over their students and have a university jail, and in the American college student's feeling of having the right to create a disturbance in the *town and break minor* police regulations without being arrested and fined.

[2] *See* Compayré, G., *Abelard*, p. 201, for illustrations.

of State and Church they discussed with a freedom before unknown. They presented their grievances to both kings and popes, from both they obtained new privileges, to both they freely offered their advice, and sometimes both were forced to do their bidding. At times important questions of State, such as the divorce of Philip of France and that of Henry VIII of England, were submitted to them for decision. They were not infrequently called upon to pass upon questions of doctrine or heresy. "Kings and princes," says Rashdall, in an excellent summary as to the value and influence of the mediæval university instruction (**R. 124**), "found their statesmen and men of business in the universities, most often, no doubt, among those trained in the practical science of Law." Talleyrand is said to have asserted that "their theologians made the best diplomats." For the first time since the downfall of Rome the administration of human affairs was now placed once more in the hands of educated men. By the interchange of students from all lands and their hospitality, such as it was, to the stranger, the universities tended to break down barriers and to prepare Europe for larger intercourse and for more of a common life.

On the masses of the people, of course, they had little or no influence, and could not have for centuries to come. Their greatest work, as has been the case with universities ever since their foundation, was that of drawing to their classrooms the brightest minds of the times, the most capable and the most industrious, and out of this young raw material training the leaders of the future in Church and State. Educationally, one of their most important services was in creating a surplus of teachers in the Arts who had to find a market for their abilities in the rising secondary schools. These developed rapidly after 1200, and to these we owe a somewhat more general diffusion of the little learning and the intellectual training of the time. In preparing future leaders for State and Church in law, theology, and teaching, the universities, though sometimes opposed and their opinions ignored, nevertheless contributed materially to the making and moulding of national history. The first great result of their work in training leaders we see in the Renaissance movement of the fourteenth and fifteenth centuries, to which we next turn. In this movement for a revival of the ancient learning, and the subsequent movements for a purer and a better religious life, the men *trained by the universities* were the leaders.

QUESTIONS FOR DISCUSSION

1. Why would the *studia publica* tend to attract a different type of scholar than those in the monasteries, and gradually to supersede them in importance?
2. Show how the mediæval university was a gradual and natural evolution, as distinct from a founded university of to-day.
3. Show that the university charter was a first step toward independence from church and state control.
4. Show the relation between the system of apprenticeship developed for student and teacher in a mediæval university, and the stages of student and teacher in a university of to-day.
5. Show how the chartered university of the Middle Ages was an "association of like-minded men for worldly purposes."
6. To what university mother does Harvard go back, ultimately?
7. Show how the English and the German universities are extreme evolutions from the mediæval type, and our American universities a combination of the two extremes.
8. Do university professors to-day have privileges akin to those granted professors in a mediæval university?
9. What has caused the old Arts Faculty to break up into so many groups, whereas Law, Medicine, and Theology have stayed united?
10. Do universities, when founded to-day, usually start with all four of the mediæval faculties represented?
11. Which of the professional faculties has changed most in the nature and character of its instruction? Why has this been so?
12. Enumerate a number of different things which have enabled the modern university greatly to shorten the period of instruction?
13. Aside from differences in teachers, why are some university subjects to-day taught much more compactly and economically than other subjects?
14. After admitting all the defects of the mediæval university, why did the university nevertheless represent so important a development for the future of western civilization?
15. What does the long continuance, without great changes in character, of the university as an institution indicate as to its usefulness to society?
16. Does the university of to-day play as important a part in the progress of society as it did in the mediæval times? Why?
17. Is the chief university force to-day exerted directly or indirectly? Illustrate.
18. What is probably the greatest work of any university, in any age?
19. Compare the influence of the mediæval university, and the Greek universities of the ancient world.
20. Explain the evolution of the English college system as an effort to improve discipline, morals, and thinking. Has it been successful in this?
21. Show how the mediæval university put books in the place of things, whereas the modern university tries to reverse this.
22. Show how the rise of the universities gave an educated ruling class to Europe, even though the nobility may not have attended them.
23. Show how, in an age of lawlessness, the universities symbolized the supremacy of mind over brute force.
24. Show how the mediæval universities aided civilization by breaking down, somewhat, barriers of nationality and ignorance among peoples.
25. Show how the university stood, as the crowning effort of its time, in the slow upward struggle to rebuild civilization on the ruins of what had once been.

SELECTED READINGS

In the accompanying *Book of Readings* the following selections are reproduced:

100. Rashdall and Minerva: University Foundations before 1600.
101. Fr. Barbarossa: Privileges for Students who travel for Study.
102. Philip Augustus: Privileges granted Students at Paris.
103. Count Rupert: Charter of the University of Heidelberg.
104. Philip IV: Exemption of Students and Masters from Taxation.
105. Vercelli: Privileges granted to the University by the City.
106. Villani: The Cost to a City of maintaining a University.
107. Pope Gregory IX: Right to suspend Lectures (*Cessatio*).
108. Roger of Wendover: a *Cessatio* at Oxford.
109. Henry III: England invites Scholars to leave Paris.
110. Pope Gregory IX: Early Licensing of Professors to teach.
111. Pope Nicholas IV: The Right to grant Licenses to teach.
112. Rashdall: A University License to teach.
113. Paris Statutes, 1254: Books required for the Arts Degree.
114. Leipzig Statutes, 1410: Books required for the Arts Degree.
115. Oxford Statutes, 1408–31: Books required for the Arts Degree.
116. Oxford, Fourteenth Century: Requirements for the Professional Degrees.
(*a*) In Theology. (*c*) In Civil Law.
(*b*) In Canon Law. (*d*) In Medicine.
117. Paris Statutes, 1270–74: Requirements for the Medical Degree.
118. Roger Bacon: On the Teaching of Theology.
119. Master Stephen: Books left by Will to the University of Paris.
120. Roger Bacon: The Scarcity of Books on Morals.
121. Balæus: Methods of Instruction in the Arts Faculty of Paris.
122. Toulouse: Time-Table of Lectures in Arts, 1309.
123. Leipzig: Time-Table of Lectures in Arts, 1519.
124. Rashdall: Value and Influence of the Mediæval University.

QUESTIONS ON THE READINGS

1. What does a glance at the page giving the university foundations before 1600 (**100**) show as to the rate and direction of the university movement?
2. How do you account for the very large privileges granted university students in the early grants (**101, 102**) and charters (**103**)? Should a university student to-day have any privileges not given to all citizens? Why?
3. Do universities, when founded to-day, secure a charter? If so, from whom, and what terms are included? Do normal schools? What form of a charter, if any, has your university or normal school?
4. Compare the freedom from taxation granted to masters and students at Paris (**104**) with the grant to professors at Brown University (**187 b**). Was the Brown University grant exceptional, or common in other American foundations?
5. Do any American cities to-day maintain colleges or universities, as did the Italian cities (**105**)? Normal schools? Are somewhat similar ends served?
6. What does the *cessatio*, as exercised by the mediæval university (**107, 108**), indicate as to standards of conduct on the part of teachers and students?
7. Why is the licensing of university professors to teach not followed in our

American universities? What has taken the place of the license? What did the mediæval license (**110, 111, 112**) really signify?

8. Compare the license to teach (**112**) with a modern doctor's diploma.
9. Compare the requirements for the Arts degree (**113, 114, 115**) with the requirements for the Baccalaureate degree at a modern university.
10. Compare the additional length of time for professional degrees (**116, 117**).
11. How do you account for the American practice of admitting students to the professional courses without the Arts course? What is the best American practice in this matter to-day, and what tendencies are observable?
12. Characterize the medical course at Paris (**117**) from a modern point of view.
13. Compare the instruction in medicine at Paris (**117**) and Toulouse (**122**). How do you account for the superiority shown by one? Which one?
14. What does the extract from Roger Bacon (**118**) indicate as to the character of the teaching of Theology?
15. What was the nature and extent of the library of Master Stephen (**119**)? Compare such a library with that of a scholar of to-day.
16. Show how the Paris statute as to lecturing (**121**) was an attempt at an improvement of the methods of instruction and individual thinking.
17. What do the two time-tables reproduced (**122, 123**) reveal as to the nature of a university day, and the instruction given?
18. Show how Rashdall's statement (**124**) that lawyers have been a civilizing agent is true.

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PART III

THE TRANSITION FROM MEDIÆVAL TO MODERN ATTITUDES

THE RECOVERY OF THE ANCIENT LEARNING THE REAWAKENING OF SCHOLARSHIP AND THE RISE OF RELIGIOUS AND SCIENTIFIC INQUIRY



CHAPTER X

THE REVIVAL OF LEARNING

The period of change. The thirteenth century has often been called the wonderful century of the mediæval world. It was wonderful largely in that the forces struggling against mediævalism to evolve the modern spirit here first find clear expression. It was a century of rapid and unmistakable progress in almost every line. By its close great changes were under way which were destined ultimately to shake off the incubus of mediævalism and to transform Europe. In many respects, though, the fourteenth was a still more wonderful century.

The evolution of the universities which we have just traced was one of the most important of these thirteenth-century manifestations. Lacking in intellectual material, but impelled by the new impulses beginning to work in the world, the scholars of the time went earnestly to work, by speculative methods, to organize the dogmatic theology of the Church into a system of thinking. The result was Scholasticism. From one point of view the result was barren; from another it was full of promise for the future. Though the workers lacked materials, were overshadowed by the mediæval spirit of authority, and kept their efforts clearly within limits approved by the Church, the "heroic industry" and the "intense application" displayed in effecting the organization, and the logical subtlety developed in discussing the results, promised much for the future. The rise of university instruction, and the work of the Scholastics in organizing the knowledge of the time, were both a resultant of new influences already at work and a prediction of larger consequences to follow. In a later age, and with men more emancipated from church control, the same spirit was destined to burst forth in an effort to discover and reconstruct the historic past.

During the thirteenth century, too, the new Estate, which had come into existence alongside of the clergy and the nobility, began to assume large importance. The arts-and-crafts guilds were attaining a large development, and out of this new burgher class the great general public of modern times has in time evolved. Trade and industry were increasing in all lands, and merchants and suc-

cessful artisans were becoming influential through their newly obtained wealth and rights. The erection of stately churches and town halls, often beautifully carved and highly ornamented, was taking place. Great cathedrals, those "symphonies in stone," of which Notre Dame (Figure 53) is a good example, were rising or being further expanded and decorated at many places in western Europe. Mystery and miracle plays had begun to be performed and to attract great attention. In the fourteenth century religious pageants were added. "All art was still religion," but an art was unmistakably arising amid cathedral-building and the setting-forth of the Christian mysteries, and before long this was to flower in modern forms of expression in painting, sculpture, and the drama.

The new spirit of nationality. The new spirit moving in western Europe also found expression in the evolution of the modern European States, based on the new national feeling. As the kingly power in these was consolidated, the developing States, each in its own domain, began to curb the dominion of the universal Church, slowly to deprive it of the governmental functions it had assumed and exercised for so long, and to confine the Pope and clergy more and more to their original functions as religious agents. The Papacy as a temporal power passed the maximum period of its greatness early in the thirteenth century; in the nineteenth century the last vestiges of its temporal power were taken away.

New national languages also were coming into being, and the national epics of the people — the Cid, the Arthurian Legends, the *Chansons*, and the *Nibelungen Lied* — were reduced to writing. With the introduction from the East, toward the close of the thirteenth century, of the process of making paper for writing, and with the increase of books in the vernacular, the English, French, Spanish, Italian, and German languages rapidly took shape. Their development was expressive of the new spirit in western Europe, as also was the fact that Dante (1264–1321), "the first literary layman since Boethius" (d. 524), wrote his great poem, *The Divine Comedy*, in his native Italian instead of in the Latin which he knew so well — an evidence of independence of large future import. New native literatures were springing forth all over Europe. Beginning with the *troubadours* in southern France (p. 186), and taken up by the *trouvères* in northern France and by the *minnesingers* in German lands, the new poetry

of nature and love and joy of living had spread everywhere.[1] A new race of men was beginning to "sing songs as blithesome and gay as the birds" and to express in these songs the joys of the world here below.

Transformation of the mediæval man. The fourteenth century was a period of still more rapid change and transformation. New objects of interest were coming to the front, and new standards of judgment were being applied. National spirit and a national patriotism were finding expression. The mediæval man, with his feeling of personal insignificance, lack of self-confidence, "no sense of the past behind him, and no conception of the possibilities of the future before him," [2] was rapidly giving way to the man possessed of the modern spirit — the man of self-confidence, conscious of his powers, enjoying life, feeling his connection with the historic past, and realizing the potentialities of accomplishment in the world here below. It was the great work of the period of transition, and especially of the thirteenth and fourteenth centuries, to effect this change, "to awaken in man a consciousness of his powers, to give him confidence in himself, to show him the beauty of the world and the joy of life, and to make him feel his living connection with the past and the greatness of the future he

[1] One of the best known of the *Troubadours* was Arnaul de Marveil. The following specimen of his art reveals both the new love of nature and the reaction which had clearly set in against the "other-worldliness" of the preceding centuries:

"Oh! how sweet the breeze of April,
Breathing soft as May draws near,
While, through nights of tranquil beauty,
Songs of gladness meet the ear:
Every bird his well-known language
Uttering in the morning's pride.
Reveling in joy and gladness
By his happy partner's side.

"When around me all is smiling,
When to life the young birds spring,
Thoughts of love I cannot hinder
Come, my heart inspiriting —
Nature, habit, both incline me
In such joy to bear my part:
With such sounds of bliss around me
Could I wear a sadden'd heart? "

[2] "In the Middle Ages man as an individual had been held of very little account. He was only part of a great machine. He acted only through some corporation — the commune, guild, the order. He had but little self-confidence, and very little consciousness of his ability single-handed to do great things or overcome great difficulties. Life was so hard and narrow that he had no sense of the joy of living, and no feeling for the beauty of the world around him, and, as if this world were not dark enough, the terrors of another world beyond were very near and real." (Adams, G. B., *Civilization during the Middle Ages*, 2d ed., p. 363.)

might create." [1] As soon as men began clearly to experience such feelings, they began to inquire, and inquiry led to the realization that there had been a great historic past of which they knew but little, and of which they wanted to know much. When this point had been reached, western Europe was ready for a revival of learning.

The beginnings in Italy. This revival began in Italy. The Italians had preserved more of the old Roman culture than had any other people, and had been the first to develop a new political and social order and revive the refinements of life after the deluge of barbarism which had engulfed Europe. They, too, had been the first to feel the inadequacy of mediæval learning to satisfy the intellectual unrest of men conscious of new standards of life. This gave them at least a century of advance over the nations of northern Europe. The old Roman life also was nearer to them, and meant more, so that a movement for a revival of interest in it attracted to it the finest young minds of central and northern Italy and inspired in them something closely akin to patriotic fervor. They felt themselves the direct heirs of the political and intellectual eminence of Imperial Rome, and they began the work of restoring to themselves and of trying to understand their inheritance.



FIG. 68. PETRARCH (1304–74)
"The Morning Star of the Renaissance"

In Petrarch (1304–74) we have the beginnings of the movement. He has been called "the first modern scholar and man of letters." Repudiating the other-worldliness ideal and the scholastic learning of his time,[2] possessed of a deep love for beauty in nature and art, a delight in travel, a desire for worldly fame, a strong historical sense, and the self-confidence to plan a great constructive work, he began the task of unearthing the monastic treasures to ascertain what the past had been and known and done. At twenty-nine he made his first great discovery, at Liège, in the form of two previously unknown orations of Cicero. Twelve

[1] *Adams, G. B., Civilization during the Middle Ages*, 2d. ed., p. 364.

[2] *Petrarch refused to have* the works of the Scholastics in his library. Though a *university man, he was* out of sympathy with the university methods of his time.

years later, at Verona, he found half of one of the letters of Cicero which had been lost for ages. All his life he collected and copied manuscripts. His letter to a friend telling him of his difficulty in getting a work of Cicero copied, and his joy in doing the work himself (**R. 125**), is typical of his labors. He began the work of copying and comparing the old classical manuscripts, and from them reconstructing the past. He also wrote many sonnets, ballads, lyrics, and letters, all filled with a new modern classical spirit. He also constructed the first modern map of Italy.



FIG. 69. BOCCACCIO (1313–75) "The Father of Italian Prose"

Through Boccaccio, whom he first met in 1350, Petrarch's work was made known in Florence, then the wealthiest and most artistic and literary city in the world,[1] and there the new knowledge and method were warmly received. Boccaccio equaled Petrarch in his passion for the ancient writers, hunting for them wherever he thought they might be found. One of his pupils has left us a melancholy picture of the library at Monte Cassino, as Boccaccio found it at the time of his visit (**R. 126**). He wrote a book of popular tales and romances, filled with the modern spirit, which made him the father of Italian prose as Dante was of Italian poetry; prepared the first dictionaries of classical geography and Greek mythology; and was the first western scholar to learn Greek.

"In the dim light of learning's dawn they stand,
Flushed with the first glimpses of a long-lost land."

A century of recovery and reconstruction. The work done by these two friends in discovering and editing was taken up by others, and during the century (1333–1433) dating from the first great "find" of Petrarch the principal additions to Latin literature were made. The monasteries and castles of Europe were ransacked in the hope of discovering something new, or more ac-

[1] "Florence was essentially the city of intelligence in early modern times. Other nations have surpassed the Italians in their genius . . . but nowhere else except at Athens has the whole population of a city been so permeated with ideas, so highly intellectual by nature, so keen in perception, so witty and so subtle, as at Florence." (Symonds, *J. A., The Renaissance in Italy.*)

curate copies of previously known books. At monasteries and churches as widely separated as Monte Cassino, near Naples; Lodi, near Milan; Milan, itself; and Vercelli, in Italy: Saint Gall and other monasteries, in Switzerland: Paris; Cluny, near the present city of Macon; Langres, near the source of the Marne; and monasteries in the Vosges Mountains, in France: Corvey, in Westphalia; and Hersfeld, Cologne, and Mainz in Germany — important finds were made.[1] Thus widely had the old Latin authors been scattered, copied, and forgotten. In a letter to a friend (**R. 127 a**) the enthusiast, Poggio Bracciolini, tells of finding (1416) the long-lost *Institutes of Oratory* of Quintilian, at Saint Gall, and of copying it for posterity. This, and the reply of his friend (**R. 127 b**), reveal something of the spirit and the emotions of those engaged in the recovery of Latin literature and the reconstruction of Roman history.

The finds, though, while important, were after all of less value than the spirit which directed the search, or the careful work which was done in collecting, comparing, questioning, inferring, criticizing, and editing corrected texts, and reconstructing old Roman life and history.[2] We have in this new work a complete break with scholastic methods, and we see in it the awakening of the modern scientific spirit.[3] It was this same critical, constructive spirit which, when applied later to Christian practices, brought on the Reformation; when applied to the problems of the universe, revealed to men the wonderful world of science; and when applied to problems of government, led to the questioning of the theory of the divine right of kings, and to the evolution of democracy. We have here a modern spirit, a craving for truth for its own sake, an awakening of the historical sense,[4] and an ap-

[1] Sandys, J. E., in his *Harvard Lectures on the Revival of Learning*, pp. 35–41, gives a list of the more important later finds, which see.

[2] Of the Florentine scholars one of the most famous was Niccolò Niccoli (1363–1436), of whom Sandys says: "Famous for his beautiful penmanship, he was much more than a copyist. He collected manuscripts, compared and collated their various readings, struck out the more obvious corruptions, restored the true text, broke it up into convenient paragraphs, added suitable summaries at the head of each, and did much toward laying the foundation of textual criticism." (Sandys, J. E., *Harvard Lectures on the Revival of Learning*, p. 39.)

[3] For example, Laurentius Valla (1407–57) of Pavia, exceeded Niccoli in ability in textual criticism. He extended this method to the New Testament and, at the request of King Alphonso, of Naples, subjected the so-called "Donation of Constantine," a document upon which the Papacy based in part its claims to temporal power, to the tests of textual criticism and showed its historical impossibility. This, indeed, was a new and daring spirit in the mediæval world, but it represented the spirit and method of the modern scholar.

[4] For example, Ciriaco, of Ancona (1391–1450), has been called "the Schliemann

preciation of beauty in literature and nature which was soon to be followed by an appreciation of beauty in art. A worship of classical literature and classical ideas now set in, of which rich and prosperous Florence became the center, with Venice and Rome, as well as a number of the northern Italian cities, as centers of more than minor importance.

The revival of Greek in the West. With the new interest in Latin literature it was but natural that a revival of the study of Greek should follow. While a knowledge of Greek had not absolutely died out in the West during the Middle Ages, there were very few scholars who knew anything about it, and none who could read it.[1] It was natural, too, that the revival of it should come first in Italy. Southern Italy (*Magna Græcia*) had remained under the Eastern Empire and Greek until its conquest by the Normans (1041–71), and to southern Italy a few Greek monks had from time to time migrated. With southern Italy, though, papal Italy and the western Christian world seem to have had little contact. In 1339, and again in 1342, a Greek monk from southern Italy visited the Pope, coming as an ambassador from Constantinople, and from him Petrarch learned the Greek alphabet. In 1353 another envoy brought Petrarch a copy of Homer. This he could not read, but in time (1367) a poor translation into Latin was effected. Boccaccio studied Greek, being the first western scholar to read Homer in the original.

Near the end of the fourteenth century it became known in Florence that Manuel Chrysoloras (c. 1350–1415), a Byzantine of noble birth, a teacher of rhetoric and philosophy at Constantinople, and the most accomplished Greek scholar of his age, had arrived in Venice as an envoy from the Eastern Emperor. Florentine scholars visited him, and on his return accompanied him to

of his time." He spent his life in travel and in copying and editing inscriptions. After exploring Italy, he visited the Greek isles, Constantinople, Ephesos, Crete, and Damascus. One of his contemporaries, Flavio Blondo, of Forli (1388–1463), published a four-volume work on the antiquities and history of Rome and Italy. These two men helped to found the new science of classical archæology.

[1] Classical scholars assert that Greek became extinct in the Italy of the Roman Church in 690 A.D. Greek was taught at Canterbury in the days of the learned Theodore, of Tarsus (R. 59 a), who died in 690. Irish monks, who carried Greek from Gaul to Ireland in the fifth century, brought it back in the seventh century to Saint Gall, founded by them in 614. "John the Scot," an Irish monk who was master of the Palace School under Charles the Bald (c. 845–55), is said to have been able to read Greek. Roger Bacon, the Oxford monk (1214–94), also knew a little Greek. William of Moerbeke, in 1260, was able to translate the *Rhetoric* and *Politics* of Aristotle for Thomas Aquinas. Greek monks were still found in the extreme south of Italy at the time of the Renaissance, and Greek has remained a living language in a few villages there up to the present time.

Constantinople to learn Greek. In 1396 Chrysoloras was invited by Florence to accept an appointment, in the university there, to the first chair of Greek letters in the West, and accepted. From 1396 to 1400 he taught Greek in the rich and stately city of Florence, at that time the intellectual and artistic center of Christendom. For a few years, beginning in 1402, he also taught Greek at the University of Pavia. He had earlier written a *Catechism of Greek Grammar*, and at Pavia he began a literal rendering of Plato's *Republic* into Latin. From his visit dates the enthusiasm for the study of Greek in the West.

Other Greek scholars arrive in Italy. Chrysoloras returned to Constantinople for a time, in 1403, and Guarina of Verona, who had been one of his pupils, accompanied him and spent five years there as a member of his household. When he returned to Italy he brought with him about fifty manuscripts, and before his death he had translated a number of them into Latin. He also prepared a Greek grammar which superseded that of Chrysoloras. In 1412 he was elected to the chair at Florence formerly held by Chrysoloras, and later he established an important school at Ferrara, based largely on instruction in the Latin and Greek classics, which will be referred to again in the next chapter.

A rage for Greek learning and Greek books now for a time set in. Aurispa, a Sicilian, went to Constantinople, learned Greek, and returned to Italy, in 1422, with 238 Greek manuscripts. Messer Filelfo, of Padua, after seven years at Constantinople, returned, in 1427, with forty manuscripts and with the grand-niece of Chrysoloras as his wife. In 1448 Theodorus Gaza (c. 1400–75), a learned Greek from the city of Thessalonica, who had fled from his native city just before its capture by the Turks (1430), came to Ferrara as the first professor of Greek in the university there. He made many translations, prepared a very popular Greek grammar, and in 1451 became professor of philosophy at Rome.

Another Greek of importance was Demetrius Chalcondyles of Athens (1424–1511), who reached Italy in 1447. In 1450 he became professor of Greek at Perugia, and of his lectures there one of his enthusiastic pupils [1] wrote:

> A Greek has just arrived, who has begun to teach me with great pains, and I to listen to his precepts with incredible pleasure, because

[1] *Gian Antonio Campano*; trans. by J. A. Symonds, *The Renaissance in Italy*, vol. II, p. 249.

he is a Greek, because he is an Athenian, and because he is Demetrius. It seems to me that in him is figured all the wisdom, the civility, and the elegance of those so famous and illustrious ancients. Merely seeing him you fancy you are looking on Plato; far more when you hear him speak.

In 1463 Demetrius transferred to Padua as professor of Greek, and was the first professor of Greek in a western European university to be paid a fixed salary. He also taught for a time at Milan, and from 1471 to 1491 was professor of Greek at Florence.



FIG. 70. DEMETRIUS CHALCONDYLES (1424–1511)
(Drawn from a picture of a fresco by Ghirlandajo, painted in 1490, on the walls of the church of Santa Maria Novella, at Florence)

A number of other learned Greeks had reached Italy prior to the fall of Constantinople (1453) before the advancing Turks,[1] and after its fall many more sought there a new home. Many of these found, on landing, that their knowledge of Greek and the possession of a few Greek books was an open sesame to the learned circles of Italy.

Enthusiasm for the new movement; libraries and academies founded. The enthusiasm for the recovery and restoration of ancient literature and history which this work awakened among the younger scholars of Italy can be imagined. While most of the professors in the universities and most of the church officials at first had nothing to do with the new movement, being wedded to scholastic methods of thinking, the leaders of the new learning drew about them many of the brightest and most energetic of the young men who came to those universities which were hospitable to the new movement.[2] Greek scholars in the university towns

[1] For long it was thought that the revival of the study of Greek in the West dated from the fall of Constantinople, in 1453, but this idea has been exploded by classical scholars. The events we have enumerated in this chapter show this, and at least five of the important Greek scholars who taught in Italy came before that date. As the Turks closed in on this wonderful eastern city, for so long the home of Greek learning and culture, many other Greek scholars fled westward. The principal Greek authors had, however, been translated into Latin before then.

[2] Some of the Italian universities participated but little in the new movement. Bologna and Pavia, *in particular, held* to their primacy in law and were but little *affected by the revival.*

were followed by admiring bands of younger students,[1] who soon took up the work and superseded their masters. Academies, named after the one conducted by Plato in the groves near Athens, whose purpose was to promote literary studies, were founded in all the important Italian cities (**R. 129**). The members usually Latinized their names, and celebrated the ancient festivals. In Venice a Greek Academy was formed in which all the proceedings were in Greek, and the members were known by Greek names. The *Academia* of Aldus, at Venice, of which his celebrated press was a department, became a veritable university for classical learning, and to participate in its proceedings scholars came from many lands. It was the curious and enthusiastic Italians who, more than the Greek scholars who taught them the language, opened up the literature and history of Athens to the comprehension of the western world.

The financial support of the movement came from the wealthy merchant princes, reigning dukes, and a few church authorities, who assisted scholars and spent money most liberally in collecting manuscripts and accumulating books. Says Symonds:

> Never was there a time in the world's history when money was spent more freely upon the collection and preservation of MSS., and when a more complete machinery was put in motion for the sake of securing literary treasures. Prince vied with prince, and eminent burgher with burgher, in buying books. The commercial correspondents of the Medici and other great Florentine houses, whose banks and discount offices extended over Europe and the Levant, were instructed to purchase relics of antiquity without regard for cost, and to forward them to Florence. The most acceptable present that could be sent to a king was a copy of a Roman historian. The best credentials which a young Greek arriving from Byzantium could use to gain the patronage of men like Palla degli Strozzi was a fragment of some ancient; the merchandise insuring the largest profit to a speculator who had special knowledge in such matters was old parchment covered with crabbed characters.[2]

Cosimo de' Medici (1389–1464), a banker and ruler of Florence, spent great sums in collecting and copying manuscripts. Vespasiano, a fifteenth-century bookseller of Florence, has left us an

[1] Bessarion (c. 1403–72), at one time Archbishop of Nicæa and afterwards a cardinal at Rome, is said to have been surrounded by a crowd of Greek and Latin scholars whenever he went out, and who escorted him every morning from his palace to the Vatican. He was a great patron of learned Greeks who fled to Italy. On his death he gave his entire library of Greek manuscripts to Venice, and this collection formed the foundation of the celebrated library of Saint Mark's.

[2] *Symonds, J. A., The Renaissance in Italy*, vol. II, p. 139.

interesting picture of the work of Cosimo in founding (1444) the great Medicean library [1] at Florence (**R. 130**) and of the difficulties of book collecting in the days before the invention of printing.



FIG. 71. BOOKCASE AND DESK IN THE MEDICEAN LIBRARY AT FLORENCE

(Drawn from a photograph)

This library was founded in 1444. It contains to-day about 10,000 Greek and Latin manuscripts, many of them very rare, and of a few the only copies known. The building was designed by Michael Angelo, and its construction was begun in 1525. The bookcases are of about this date. It shows the early method of chaining books to the shelves, and cataloguing the volumes on the end of each stack.

Under Cosimo's grandson, Lorenzo the Magnificent, who died in 1492, two expeditions were sent to Greece to obtain manuscripts for the Florentine library. Vespasiano also describes for us the books collected (c. 1475–80) for the great ducal library at Urbino (**R. 131**), the greatest library in the Christian world at the time of

[1] In 1436, Niccolò de Niccoli, a copyist of Florence, died, leaving his collection of eight hundred manuscripts to the Medicean Library for the use of the public, meaning thereby any scholar. *This is said to have been the first public-library collection in western Europe.*

its completion, and the work of Pope Nicholas V[1] (1447–1455) in laying the foundations (1450) for the great Vatican Library at Rome (**R. 132**). Nicholas was an enthusiast in the new movement, and formed a plan for the translation of all the Greek writers into Latin. A later Pope, Leo X (1513–1521), planned to make Rome the international center for Greek learning.

The movement extends to other countries. Petrarch made his first great find in 1333, and up to 1450 the Revival of Learning, often termed the Renaissance, was entirely an Italian movement. By that date the great work in Italy had been done, and the Italians were once more in possession of the literature and history of the past. With them the movement was literary, historical, and patriotic in purpose and spirit. With them the movement was known as ***humanism***, from an old Roman word (***humanitas***) meaning culture, and this term came to be applied to the new studies in all other lands. In their work with the literatures, inscriptions, coins, and archæological remains of the Greeks and Romans, their own literature, history, mythology, and political and social life was reconstructed. The methods employed were the methods used in modern science, and the result was to develop in Italy a new type of scholar, possessed of a literary, artistic, and historical appreciation unknown since the days of ancient Rome, and with the greatest enthusiasm for Latin as a living language.

By the time the revival had culminated in Italy it began to be heard of north of the Alps. France was the first country to take up the study of Greek, a professorship being established at Paris in 1458. There was but little interest in the subject, however, or in any of the new studies, until two events of political importance, forty years later, brought Frenchmen in close touch with what had been done in northern Italy. In 1494 Charles VIII, of France, claiming Naples as his possession, took an army into Italy, and forcibly occupied Rome and Florence. Four years later his successor, Louis XII, claimed Milan also and seized it and Naples, maintaining a French court at Milan from 1498 to 1512. Though both these expeditions were unsuccessful, from a political point of view, the effect of the direct contact with hu-

[1] Nicholas as a monk had had his enthusiasm for the new movement awakened, and had gone deeply into debt for manuscripts. He was helped by Casimo de' Medici. When he became Pope (1447–55) he collected scholars about him, built up the university at Rome, laid the foundations of the great Vatican Library, and made Rome a great literary center. After the death of Lorenzo the Magnificent at Florence, *in 1492, the glory* that had been Florence passed to Rome, and it in turn became *the cultural center* of Christendom.

manism in its home was lasting. New ideas in architecture, art, and learning were carried back to France, French scholars traveled to Italy, and early in the sixteenth century Paris became a center for the new humanistic studies. In Greek, France completely superseded Italy as the interpreter of Greek life and literature to the modern world.

In 1473 a Spanish scholar, Mebrissensis (1444–1522), returned home after twenty years in Italy and introduced Greek at Seville, Salamanca, and Alcalà.



RUDOLPH AGRICOLA (1443–85)
Early Dutch Humanist. Lectured at Heidelberg
(From a contemporary engraving)



THOMAS LINACRE (c. 1460–1524)
English Professor of Medicine and Lecturer on Greek
(From a portrait in the British Museum)

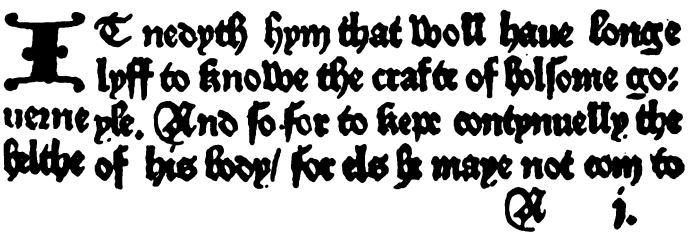
FIG. 72. TWO EARLY NORTHERN HUMANISTS

About 1488 William Linacre (c. 1460–1524) and William Grocyn (1446–1514), two Oxford graduates, went to Florence from England, studying Greek under Demetrius and Chalcondyles, and, returning, introduced the new learning at Oxford.[1] Linacre, as professor of medicine, translated much of Galen (p. 198) from the Greek, and he and Grocyn lectured on Greek at the Univer-

[1] Much earlier, another Oxford man had returned from study under Guarina at Ferrara — William Gray (1449) — but he seems to have made no impression. A few other scholars went before Linacre and Grocyn and Colet, but these men were the *first to attract attention on their* return.

1457. The Mayence Psalter, the first dated book, printed.[1]
1462. Adolph of Nassau pillaged Mainz, drove out the printers, and in consequence scattered the art over Europe.
1465. Press set up in the German monastery of Subiaco, in the Sabine Mountains, in Italy.
1467. This press moved to Rome.
1469. Presses at Paris and Vienna.
1470. Printing introduced into Switzerland.
1471. Presses set up at Florence, Milan, and Ferrara.
1473. Printing introduced into Holland and Belgium.
1474. Printing introduced into Spain.
1474–77. Printing introduced into England. Caxton set up his press in 1477.
1476. First book printed in Greek at Milan.
1490. The Aldine press established at Venice, by Aldus Manutius.
1501. First Greek book printed in Germany, at Erfurt.
1563. First newspaper established, in Venice.

Inventions traveled but slowly in those days, yet in time the press was to be found in every country of Europe. The professional copyists made a great outcry against the innovation; presses were at first licensed and closely limited in number; in France the University of Paris was given the proceeds of a tax levied on all books printed; and in England the beginnings of the modern copyright are to be seen in the necessity of obtaining a license from the ecclesiastical authorities to be permitted to print a book.


I T nedyth hym that wyll haue longe lyff to knowe the crafte of holsome gouernaūce. And so for to kepe contynuelly the helthe of his body/ for els he maye not come to

A i.

FIG. 74. AN EARLY SPECIMEN OF CAXTON'S PRINTING

In cutting and casting the first type a style of heavy-faced letter, much like that written by the mediæval monks — the so-called *Gothic* — was used. Caxton, in England, used this at first,

[1] A second edition of this Psalter was printed two years later, and contains at the end, in Latin, a statement which Robinson translates as follows: "The present volume of the Psalms, which is adorned with handsome capitals and is clearly divided by means of rubrics, was produced not by writing with a pen, but by an ingenious invention of printed characters: and was completed to the glory of God and the *honor of Saint James* by John Fust, a citizen of Mayence, and Peter Schoifher of *Gernsheim, in the year* of our Lord 1459, on the 29th of August."

and the Germans have continued its use up to the present time. The Italians, however, soon devised a type with letters like those used by the old Romans — the so-called Roman type, this type — which was soon accepted in all non-German European countries. The Italians also devised a compressed type — the *Italic* — which enabled printers to get more words on a page.

Venice, almost from the first, became the center of the book trade, and books literally poured from the presses there. By 1500 as many as five thousand editions, often of as many as a thousand copies to an edition, had been printed in Italy.[1] Of this number 2835 had been printed in Venice, and most of them by the Aldine press of Aldus Manutius, and edited by the *Academia* (p. 250) connected therewith.[2] By 1500 many books had also been printed in a number of northern cities,[3] and Lyons, Paris, Basel, Nuremberg, Cologne, Leipzig, and London soon became centers of the northern book trade. Caxton in England soon vied with Aldus in Venice as a printer of beautiful books. When we remember that it required fifty-three days (Sandys) to make by hand one copy of Quintilian's *Institutes*, and forty-five copyists twenty-two months to reproduce two hundred volumes for the Medicean Library at Florence (**R. 130**), the enormous importance of an invention which would print rapidly a thousand or more copies of a book, all exactly alike and free from copyist errors, can be appreciated. It tremendously cheapened books,[4] made the general use of the textbook method of teaching possible, and paved the way for a great extension of schools and learning (**R. 134**). From now on the press became a formidable rival to the pulpit and the sermon, and one of the greatest of instruments for human progress and individual liberty. From this time on educational progress was to be much more rapid than it had been in the past. From an educational point of view the invention of printing might almost be taken as marking the close of the mediæval and the beginning of modern times.

Rise of geographical discovery. The new influences awakened by the Revival of Learning found expression in other directions.

[1] The usual early edition was three hundred copies.

[2] At Florence about three hundred editions are said to have been printed before 1500; at Bologna, 298; at Milan, 625; and at Rome, 925.

[3] The following numbers of different editions are said to have been printed at the northern cities before 1500: Paris, 751; Cologne, 530; Strassburg, 526; Nuremberg, 382; Leipzig, 351; Basel, 320; Augsburg, 256; Louvain, 116; Mayence, 134; Deventer, 169; London, 130; Oxford, 7; Saint Albans, 4.

[4] *By 1500 it is said that a book* could be purchased for the equivalent of fifty *cents which a half century before* would have cost fifty dollars.

One of these was geographical discovery, itself an outgrowth of that series of movements known as the *Crusades*, with the accompanying revival of trade and commerce. These led to travel, exploration, and discovery. By the latter part of the thirteenth century the most extensive travel which had taken place since the days of ancient Rome had begun, and in the next two and a half centuries a great expansion of the known world took place.



FIG. 75. THE WORLD AS KNOWN TO CHRISTIAN EUROPE BEFORE COLUMBUS

Marco Polo and Sir John Mandeville made extended travels to the Orient, and returning (Polo returned, 1295) described to a wondering Europe the new lands and peoples they had seen. The *Voyages* of Polo and the *Travels* of Mandeville were widely read. By the beginning of the fourteenth century the compass had been perfected, in Naples, and a great era of exploration had been begun. In 1402 venturesome sailors, out beyond the "Pillars of Hercules," discovered the Canary Islands; in 1419 the Madeira Islands were reached; in 1460 the Cape Verde Islands were found; in 1487 Bartholomew Diaz rounded the southern tip of Africa; and in 1497 Vasco da Gama discovered the long-hoped-for sea route to India. Five years later, sailing westward with the same end in view, Columbus discovered the American continent. Finally, in 1519–21, Magellan's ships circumnavigated the globe, and, returning safely to Spain, proved that the world was round. In 1507 Waldenseemüller published his *Introduction to Geography*, a book that was widely read, and one which *laid the foundations* of this modern study.

The effect of these discoveries in broadening the minds of men

can be imagined. The religious theories and teachings of the Middle Ages as to the world were in large part upset. New races and new peoples had been found, a round earth instead of a flat one had been proved to exist, new continents had been discovered, and new worlds were now ready to be opened up for scientific exploration and colonization.

About 1500 a stimulating time. The latter part of the fifteenth century and the earlier part of the sixteenth was a stimulating period in the intellectual development of Christian Europe. The Turks had closed in on Constantinople (1453) and ended the Eastern Empire, and many Greek scholars had fled to the West. Though the Revival of Learning had culminated in Italy, its influence was still strongly felt in such cities as Florence and Venice, while in German lands and in England the reform movement awakened by it was at its height. Greek and Hebrew were now taught generally in the northern universities. Everywhere the old scholastic learning and methods were being overturned by the new humanism, and scholastic teachers were being displaced from their positions in the universities and schools. The new humanistic university at Wittenberg, founded in 1502, was exerting large influence among German scholars and attracting to it the brightest young minds in German lands. Erasmus was the greatest international scholar of the age, though ably seconded by distinguished humanistic scholars in Italy, France, England, the Low Countries, and German lands. The court schools of Italy (**R. 135**) and the municipal colleges of France (**R. 136**) were marking out new lines in the education of the select few. Colet was founding his reformed grammar school (1510) at Saint Paul's, in London (**R. 138**), the first of a long line of English humanistic grammar schools. Leonardo da Vinci, Raphael, and Michael Angelo were adding new fame to Italy, and carrying the Renaissance movement over into that art which the world has ever since treasured and admired.

The Italian cities, particularly Genoa and Venice, had become rich from their commerce, as had many cities in northern lands. Everywhere the cities were centers for the new life in western Christendom. England was rapidly changing from an agricultural to a manufacturing nation. The serf was evolving into a free man all over western Europe. Italian navigators had discovered new sea routes and lands, and robbed the ocean of its terrors. *Columbus had discovered* a new world, soon to be peopled

and to become the home of a new civilization. Magellan had shown that the world was round and poised in space, instead of flat and surrounded by a circumfluent ocean. The printing-press had been perfected and scattered over Europe, and was rapidly multiplying books and creating a new desire to read (R. 134). The Church was more tolerant of new ideas than it had been in the past, or soon was to be for centuries to come. All of these new influences and conditions combined to awaken thought as had not happened before since the days of ancient Rome. The world seemed about ready for rapid advances in many new directions, and great progress in learning, education, government, art, commerce, and invention seemed almost within grasp. Unfortunately the promise was not to be fulfilled, and the progress that seemed possible in 1500 was soon lost amid the bitterness and hatreds engendered by a great religious conflict, then about to break, and which was destined to leave, for centuries to come, a legacy of intolerance and suspicion in all lands.

QUESTIONS FOR DISCUSSION

1. In what way was the fact that Dante wrote his *Divine Comedy* in Italian instead of Latin an evidence of large independence?
2. Was it a good thing for peace and civilization that the modern languages arose, instead of all speaking and writing Latin? Why?
3. Of what value to one is a "sense of the past behind him, and a conception of the possibilities of the future before him," by way of giving perspective and self-confidence? Do we have many mediæval-type people to-day?
4. Show how the work of Petrarch required a man with a strong historic sense.
5. Show the awakening of the modern scientific spirit in the critical and reconstructive work of the scholars of the Revival.
6. Of what was the exposure of the forgery of the "Donation of Constantine" a precursor?
7. Contrast the modern and the mediæval spirit as related to learning.
8. Suppose that we should unexpectedly unearth in Mexico a vast literature of a very learned and scholarly people who once inhabited the United States, and should discover a key by which to read it. Would the interest awakened be comparable with that awakened by the revival of Greek in Italy? Why?
9. What does the fact that no copy of Quintilian's *Institutes*, a very famous Roman book, was known in Europe before 1416 indicate as to the destruction of books during the early Christian period?
10. What does the fact that the Christians knew little about Greek literature or scholarship for centuries, and that the awakening was in large part brought about by the pressure of the Turks on the Eastern Empire, indicate as to intercourse among Mediterranean peoples during the *Middle Ages?*
11. *How do you explain* the fact that the recovery of the ancient learning

was very largely the work of young men, and that older professors in the universities frequently held aloof from any connection with the movement?

12. Compare the financial support of the Revival in Italy with the support of universities and of scientific undertakings in America during recent times.
13. Explain the long-delayed interest in the Revival in the northern countries.
14. Trace the larger steps in the transference of Greek literature and learning from Athens, in the fifth century B.C., to its arrival at Harvard, in Massachusetts, in 1636.
15. What was the importance of the rediscovery of Hebrew?
16. Show how the invention of printing was a revolutionary force of the first magnitude.
17. Why should a license from the Church have been necessary to print a book? Have we any remaining vestiges of this church control over books?
18. Do you see any special reason why Venice should have become the early center of the book trade?
19. Show how the printing-press became "a formidable rival to the pulpit and the sermon, and one of the greatest instruments for human progress and liberty."
20. One writer has characterized the Revival of Learning as the beginnings of the emergence of the individual from institutional control, and the substitution of the humanities for the divinities as the basis of education. Is this a good characterization of a phase of the movement?
21. Counting each edition of a printed book at only three hundred copies, how many volumes had been printed before 1500 at the places listed in footnote 3, page 257?

SELECTED READINGS

In the accompanying *Book of Readings* the following selections are reproduced:

125. Petrarch: On copying a Work of Cicero.
126. Benvenuto: Boccaccio's Visit to the Library at Monte Cassino.
127. Symonds: Finding of Quintilian's *Institutes* at Saint Gall.
(*a*) Letter of Poggio Bracciolini on the "Find."
(*b*) Reply of Lionardo Bruni.
128. MS.: Reproducing Books before the Days of Printing.
129. Symonds: Italian Societies for studying the Classics.
130. Vespasiano: Founding of the Medicean Library at Florence.
131. Vespasiano: Founding of the Ducal Library at Urbino.
132. Vespasiano: Founding of the Vatican Library at Rome.
133. Green: The New Learning at Oxford.
134. Green: The New Taste for Books.

QUESTIONS ON THE READINGS

1. Is it probable that Petrarch's explanation (**125**) of why many of the older Latin books were copied so infrequently, psalters being preferred instead, is correct?
2. How do you explain the later neglect of so valuable a library as that at Monte Cassino (**126**) or Saint Gall (**127 a**)?
3. *Was Lionardo Bruni's letter* to Poggio (**127 b**) overdrawn?

4. Was there anything unnatural about the work and customs of the Italian societies for studying the classics (**129**)? Compare with a modern literary or scientific society, or with the National Dante Society.
5. What does the extract from Vespasiano, telling how he got books for Cosimo de' Medici (**130**), indicate as to the scarcity of books in Italy toward the middle of the fifteenth century?
6. The library of the Duke of Urbino (**131**) was the most complete collected up to that time. List the larger classifications of the books copied, as to the lines represented in a great library of that day.
7. What does the work of Pope Nicholas V, in establishing the Vatican Library (**132**), indicate as to his interest in the new humanistic movement?
8. Show from the selection from Green (**133**) that the revival movement in England was essentially a religious revival.
9. Explain Green's cause-and-effect theory, as given in selection **134**.

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CHAPTER XI

EDUCATIONAL RESULTS OF THE REVIVAL OF LEARNING

Significance of the Revival of Learning. It is often stated that the roots of all our modern educational practices in secondary education lie buried deep in the great Italian Revival of Learning. If we limit the statement to the time preceding the middle of the nineteenth century we shall be more nearly correct, as tremendous changes in both the character and the purpose of secondary education have taken place since that time. The important and outstanding educational result of the revival of ancient learning by Italian scholars was that it laid a basis for a new type of education below that of the university, destined in time to be much more widely opened to promising youths than the old cathedral and monastic schools had been. This new education, based on the great intellectual inheritance recovered from the ancient world by a relatively small number of Italian scholars, dominated the secondary-school training of the middle and higher classes of society for the next four hundred years. It clearly began by 1450, it clearly controlled secondary education until at least after 1850. Out of the efforts of Italian scholars to resurrect, reconstruct, understand, and utilize in education the fruits of their legacy from the ancient Greek and Roman world, arose modern secondary education, as contrasted with mediæval church education.

Mediæval education, after all, was narrowly technical. It prepared for but one profession, and one type of service. There was little that was liberal, cultural, or humanitarian about it. It prepared for the world to come, not for the world men live in here The new education developed in Italy aimed to prepare directly for life in the world here, and for useful and enjoyable life at that. Combining with the new humanistic (cultural) studies the best ideals and practices of the old chivalric education — physical training, manners and courtesy, reverence — the Italian pioneers devised a scheme of education, below that of the universities, which they claimed prepared youths not only for an intellectual appreciation of the great and wonderful past of which they were descendants, *but also for intelligent* service in the two great non-

church occupations of Italy in the fifteenth century — public service for the City-State, and commerce and a business life. This new type of education spread to other lands, and a new type of secondary-school training, actuated by a new and a modern purpose, thus came out of the revival of learning in Italy.

The movement in Italy patriotic. The inspiration for the revival of learning in Italy did not originate with the universities. Even the new chairs when established in the universities were regarded as inferior, and, in true university fashion, the occupants were tolerated by the other professors rather than approved of by them. Some of the universities — Pavia and Bologna, in particular — had practically nothing to do with the new movement.[1] Even in the rich and learned city of Florence, the head and front of the revival movement, the church scholars and many university men took little or no part in the restoration of the old studies. The learned archbishop, Saint Antoninus, who presided over the cathedral at Florence during the brightest days of that city's history, pursued his mediæval scholastic instruction undisturbed, and even wrote a *Summa Theologica* of his own.



FIG. 76. SAINT ANTONINUS AND HIS SCHOLARS

Saint Antoninus (1389–1459) was the learned and pious Archbishop of Florence from 1446 until his death. The picture of him giving instruction is from the Venice (1503) edition of his *Summa Theologica*.

The revival movement, on the contrary, was directed in its beginnings by a small group of patriotic Italians possessed of a modern spirit, and was financed by intelligent and patriotic merchants, bankers, and princes. Surrounded on all sides by monuments and remains testifying to Roman greatness, and with

[1] Much as universities have contributed to intellectual progress, hostility to new types of thinking and to new subjects of study has been, through all time, a characteristic of many of their members, and often it has required much pressure *from progressive forces* on the outside to overcome their opposition to new lines of *scholarship and public* service.

Roman speech in constant use by the scholars of the Church, the revival of Latin literature meant more to Italian scholars than to those of any other country. It seemed to them still possible to revive Roman life and make Roman speech once more the language of the learned world. The revival of Latin literature, too, meant much more to them than the revival of Greek. The chief value of the latter was to open up a still greater past, and through this to illuminate Roman life and literature. After about 1500 the enthusiasm for Greek rapidly died out in Italy, and the further interpretation of Greek life and thought was left to the northern nations.

In this effort to revive the old Roman world the Italian scholars received the sympathy of the great men of wealth, and of some of the popes of the time. It was the Medici family at Florence who aided the movement liberally there, rejuvenated the university of Florence along new humanistic lines, accumulated libraries there (**R. 130**) and at Venice, and aided scholars all over Italy. At Milan the Visconti family paid the expenses of a chair of Latin and Greek, established in the university there in 1440. Popes Nicholas V and Leo X were prodigal in their support of the new learning at Rome (**R. 132**), and the university there was reconstructed along modern lines. At Venice the rulers gave large financial and other support to the leaders of the new learning. Academies (**R. 129**), under the patronage of the nobility, were founded in almost all the northern Italian cities, and those in political power did much to make their cities notable centers for classical studies.

New schools created. The "finds" began with Petrarch's discovery of two orations of Cicero, in 1333, and by the time "the century of finds" (1333–1433) was drawing to a close the materials for a new type of secondary education had been accumulated. Not only was the old literature discovered and edited, but the finding of a complete copy of Quintilian's *Institutes of Oratory* at Saint Gall (**R. 127**), in 1416, gave a detailed explanation of the old Roman theory of education at its best. A number of "court schools" now arose in the different cities, to which children from the nobility and the banking and merchant classes were sent to enjoy the advantages they offered over the older types of religious schools.

Two of the most famous teachers in these court schools were *Vittorino da Feltre, who* conducted a famous school at Mantua

from 1423 to 1446, and Guarino da Verona, who conducted another almost equally famous school at Ferrara from 1429 to 1460. Taking boys at nine or ten and retaining them until twenty or twenty-one, their schools were much like the best private boarding-schools of England and America to-day. Drawing to them a



GUARINO DA VERONA (1374–1460)
(Drawn from a photograph of a contemporary painting. School at Ferrara, 1429–1460)



VITTORINO DA FELTRE (1378–1446)
(Drawn from a medallion in the British Museum. School at Mantua, 1423–46)

FIG. 77. TWO EARLY ITALIAN HUMANIST EDUCATORS

selected class of students; emphasizing physical activities, manners, and morals; employing good teaching processes; and providing the best instruction the world had up to that time known — the influence of these court schools was indeed large. Many of the most distinguished leaders in Church and State and some of the best scholars of the time were trained in them. By better methods they covered, in shorter time, as much or more than was provided in the Arts course of the universities, and so became rivals of them. The ultimate result was that, with the evolution of a series of secondary schools which prepared for admission to the universities, the gradual "humanizing" of the universities, and the introduction of printed textbooks, the Arts courses in the *universities were* advanced to a much higher plane. We have *here one of the first* of a number of subsequent steps by means of

which new knowledge, organized into teaching shape, has been passed on down to lower schools to teach, while the universities have stepped forward into new and higher fields of endeavor.

The humanistic course of study. The new instruction was based on the study of Greek and Latin, combined with the courtly ideal and with some of the physical activities of the old chivalric education. Latin was begun with the first year in school, and the regular Roman emphasis was placed on articulation and proper accent. After some facility in the language had been gained, easy readings, selected from the greatest Roman writers, were attempted. As progress was made in reading and writing and speaking Latin as a living language, Cicero and Quintilian among prose writers, and Vergil, Lucan, Horace, Seneca, and Claudian among the poets, were read and studied. History was introduced in these schools for the first time and as a new subject of study, though the history was the history of Greece and Rome and was drawn from the authors studied. Livy and Plutarch were the chief historical writers used. Nothing that happened after the fall of Rome was deemed as of importance. Much emphasis was placed on manners, morality, and reverence, with Livy and Plutarch again as the great guides to conduct. Throughout all this the use of Latin as a living language was insisted upon; declamation became a fine art; and the ability to read, speak, and compose in Latin was the test. Cicero, in particular, because of the exquisite quality of his Latin style, became the great prose model. Quintilian was the supreme authority on the purpose and method of teaching (**R. 25**). Greek also was begun later, though studied much less extensively and thoroughly. The Greek grammar of Theodorus Gaza (p. 248) was studied, followed by the reading of Xenophon, Isocrates, Plutarch, and some of Homer and Hesiod.

This thorough drill in ancient history and literature was given along with careful attention to manners and moral training, and each pupil's health was watchfully supervised — an absolutely new thought in the Christian world. Such physical sports and games as fencing, wrestling, playing ball, football, running, leaping, and dancing were also given special emphasis. Competitive games between different schools were held, much as in modern times.

The result was an all-round physical, mental, and moral training, vastly superior to anything previously offered by the cathedral *and other church schools*, and which at once established a

new type which was widely copied. A number of these new teachers, called *humanists*, wrote treatises on the proper order of studies, the methods to be employed, the right education of a prince, liberal education, and similar topics.[1] One of these, Battista Guarino, describing the education provided in the school which his father founded at Ferrara (**R. 135**), laid down a dictum which was accepted widely until the middle of the nineteenth century, when he wrote:

> I have said that ability to write Latin verse is one of the essential marks of an educated person. I wish now to indicate a second, which is of at least equal importance, namely, familiarity with the literature and language of Greece. The time has come when we must speak in no uncertain voice upon this vital requirement of scholarship.

Humanism in France. From Italy the new humanism was carried to France, along with the retreating armies that had occupied Naples, Florence, and Milan (p. 252), and when Francis I came to the French throne, in 1515, the new learning found in him a willing patron. Though there had been beginnings before this, the new learning really found a home in France now for the first time. Here, too, it became associated with court and noble, and the schools created to furnish this new instruction were provided at the instigation of some form of public authority. The greatest humanistic scholar in France at the time, Budæus, was made royal librarian, in 1522. His study of the old Roman coinage, upon which he spent nine years, would pass to-day as a study representing a high grade of scholarship, and was in marked contrast with the scholastic methods of the university. In his writings Budæus set forth for France the dictum that every man, even if he be a king, should be devoted to letters and liberal learning, and that this culture can be obtained only through Greek and Latin, and of these, unlike the Italians, he held Greek to be the more important. Other scholars now helped to transfer the center for Greek scholarship to Paris, where it remained for the *next two centuries*.



FIG. 78. GUILLAUME BUDÆUS (1467–1540)

[1] *For a list of these* treatises, see Monroe's Cyclopedia of Education, vol. v, p. 154.

A royal press was set up in Paris, in 1526, to promote the introduction of the new learning. Libraries were built up, as in Italy. Humanist scholars were made secretaries and ambassadors. The *Collège de France* was established at Paris, by direction of the King, with chairs in Latin, Greek, Hebrew, and mathematics. To Hebrew the Italians had given almost no attention, but in France, and particularly in Germany, Hebrew became an important study. The development of schools in northern France was hindered by the dissensions following the religious revolts of Luther and Calvin, but in southern France many of the cities founded municipal colleges, much like the court schools of northern Italy in type. The work of the city of Bordeaux in reorganizing its town school along the new lines was typical of the work of other southern cities. Good teachers, liberal instruction, and a broad-minded attitude on the part of the governing authorities [1] made this school, known as the *Collège de Guyenne*, notable not only for humanistic instruction, but for intelligent public education during the second half of the sixteenth century. The picture of this college (school) left us by its greatest principal, Elie Vinet (**R. 136**), gives an interesting description of its work.

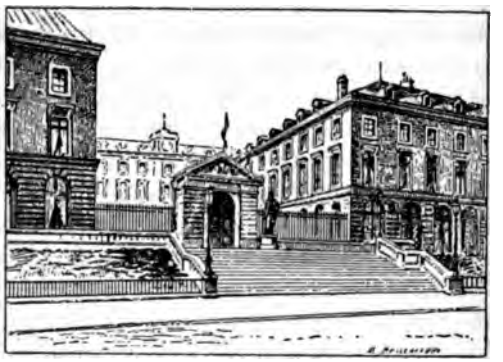


FIG. 79. COLLÈGE DE FRANCE
Founded at Paris, in 1530, by King Francis I. for instruction in the new humanistic learning

Humanism in Germany. The French language and life was closely related to that of northern Italy, and French religious thought had always been so closely in touch with that of Rome that something of the Italian feeling for the old Roman culture and institutions was felt by the humanists of France. In Germany and England no such feeling existed, and in these countries any effort to discredit the rising native languages was much more likely to be regarded as mere pedantry. In both these countries, though, Latin was still the language of the Church, of the univer-

[1] *The distinguished* author, Montaigne, was mayor in 1580.

sities, of all learned writing, and the means of international intercourse, and after the new humanism had once obtained a foothold it was welcomed by scholars as a great addition to existing knowledge. Erasmus, the foremost scholar of his day, not only labored hard to introduce the new learning in the schools, but welcomed the restored Roman tongue as an international language for scholarship, as a potent weapon for destroying barriers of language, religion, law, and possibly in time governments based on nationality, and for the promise it gave of peace in international relationships. In both Germany and England, in place of the patriotic fervor of the Italians, religious zeal, as we shall see later on, was kindled by the new humanistic studies.

Among the universities Vienna, Heidelberg, Erfurt, Tübingen, and Leipzig (see Figure 61) were foremost in the introduction of the new learning. Erfurt became the center of a group of humanistic scholars during the closing years of the fifteenth century, and the first Greek book printed in Germany appeared there, in 1501. At both Tübingen and Heidelberg Reuchlin (p. 254) taught for a time, and both institutions early became centers for the study of Latin, Greek, and Hebrew. At Leipzig the reigning duke brought various humanistic scholars to the university to lecture, after 1507, and in 1519 entirely reformed the university by subordinating the mediæval disciplines to the new studies. Four new universities — Wittenberg (1502), Marburg (1527), Königsburg (1544), and Jena (1558) — were established on the new humanistic basis, and from their beginning were centers for the new learning. At Wittenberg, Martin Luther had been made Professor of Theology, in 1508, when but twenty-five years of age, and to Wittenberg the Electoral Prince, in 1518, brought the young Melanchthon, then but twenty-one, as Professor of Greek. The universities of Germany were more profoundly affected by the introduction of the new learning than were those of any other country. The monastic orders and the Scholastics, who had for long controlled the German institutions, were overthrown by the aid of the ruling princes, and by the close of the first quarter of the sixteenth



FIG. 80. JOHANN REUCHLIN (1455–1522) "Father of modern Hebrew Studies"

century the new humanism was everywhere triumphant in German lands.

German secondary schools. The enthusiasm of the humanists for the new learning led them to urge the establishment of humanistic secondary schools in the German cities. The schools of "The Brethren of the Common Life" (Hieronymians), a teaching order founded by Gerhard Grote at Deventer, Holland, in 1384, and which had established forty-five houses by the time the new learning came into the Netherlands from Italy, at once adopted the new studies, soon trebled the number of its houses, and for decades supplied teachers of Latin, Greek, and Hebrew to all the surrounding countries.[1] Wessel, Agricola, Hegius, Reuchlin, and Sturm were among their greatest teachers, and Erasmus their greatest pupil. Here and there in German cities Latin schools, teaching the subjects of the *Trivium*, but principally the elements of Latin and grammar, had been established in the course of the later Middle Ages, and to these scholars trained in the new learning gradually made their way, secured employment, and thus quietly introduced a purified Latin and the intellectual part of the new humanistic course of study. Up to 1520 this method was followed entirely in German lands.

As in Italy, the commercial cities were among the first to provide schools of the new type. In 1526 the commercial city of Nuremberg, in southern Germany, opened one of the first of the new city humanistic secondary schools, Melanchthon being present and giving the dedicatory address. A number of similar schools were founded about this time in various German cities — Ilfeld, Frankfort, Strassburg, Hamburg, Bremen, Dantzig — among the number. Many of these failed, as did the one at Nuremberg, to meet the needs of the people in essentially commercial cities. Whatever might have been true in more cultured Italy, in German cities a rigidly classical training for youth and early manhood was found but poorly suited to the needs of the sons of wealthy burghers destined to a commercial career. The rising commerce of the world apparently was to rest on native languages, and not on elegant Latin verse and prose. The commercial classes soon fell back on burgher schools, elementary vernacular schools, writing and reckoning schools, business ex-

[1] This order had begun as an institution for the instruction of the poor, emphasizing the use of the Bible and the vernacular, but when the new learning came in from Italy, classical learning was added and the instruction of the brotherhood became largely humanistic.

perience, and travel for the education of their sons, leaving the Latin schools of the humanists to those destined for the service of the Church, the law, teaching, or the higher state service.

The Work of Johann Sturm. The most successful classical school in all Germany, and the one which formed the pattern for future classical creations, was the *gymnasium*[1] at Strassburg, under the direction (1536–82) of the famous Johann Sturm, or Sturmius, as he came to call himself. This was one of the early classical schools founded by the commercial cities, but it had not been successful. In 1536 the authorities invited Sturm, a graduate of the University of Louvain, and at that time a teacher of classics and dialectic at Paris, where he had come in contact with the humanism brought from Italy, to become head of the school and reorganize it. This he did, and during the forty-five years he was head of the school it became the most famous classical school in continental Europe. His *Plan of Organization*, published in 1538; his *Letters to the Masters* on the course of study, in 1565; and the record of an examination of each class



FIG. 81. JOHANN STURM (1507–89)
(After a contemporary engraving by Stofflin)

[1] The influence of the old Greek classical terms in this connection is interesting, and is another evidence of the permanence of Greek ideas. Sturm here adopted the Italian nomenclature, Vittorino da Feltre having called his school a *Gymnasium Palatinum*, or Palace School. Guarino wrote of *gymnasia Italorum*. Both derived the term from the *Gymnasia* of ancient Greece, just as the academies of the Italian cities took their name from the *Academy* of Plato at Athens (p. 44). Another famous Greek school was the *Lyceum*, founded by Aristotle (p. 44). All these names came in during the Revival of Learning in Italy, and were applied to the new classical schools at a time when every term, and even the names of men, were given classical form. As a result the Italian secondary schools of to-day are known as *ginnasio*, and the German classical secondary schools as *gymnasia*. The French took their term from the *Lyceum*, hence the French *lycées*. The English named their classical schools after the chief subject of study, hence the English *grammar schools*. In 1638 Milton visited Italy, and was much entertained in Florence by members of the academy and university there. In 1644 he published his *Tractate on Education*, in which he outlined his plan for a series of classical *academies* for England. Milton was a church reformer, as were the Puritans, and the Puritans, in settling America, brought over first the term *grammar school*, and later the term *academy* to New England.

in the school, conducted in 1578, all of which have been preserved, give us a good idea as to the nature of the organization and instruction (R. 137).

Sturm was a strong and masterful man, with a genius for organization. Probably adopting the plan of the French colleges (R. 136), he organized his school into ten classes,[1] one for each year the pupil was to spend in the school, and placed a teacher in charge of each. The aim and end of education, as he stated it, was "piety, knowledge, and the art of speaking," and "every effort of teachers and pupils" should bend toward acquiring "knowledge, and purity and elegance of diction." Of the ten years the pupil was to spend in the *gymnasium*, seven were to be spent in acquiring a thorough mastery of pure idiomatic Latin, and the three remaining years to the acquisition of an elegant style. Cicero was the great model, but Vergil, Plautus, Terence, Martial, Sallust, Horace, and other authors were read and studied. Except that the Catechism was first studied in the native German, Latin was made the language of the classroom. Great emphasis was placed on letter-writing, declamation, and the acting of plays. Rhetoric, too, was made a very important subject of study. Greek was begun in the fifth year of school and continued throughout, all instruction in Greek being given through the medium of the Latin.[2] The instruction in both Latin and Greek was much like that of the court schools of Italy, except that in Greek the New Testament was read in addition. The plays and games and physical training of the Italian schools, however, were omitted; much less emphasis was placed on manners and gentlemanly conduct; and in educational purpose a narrow drill was substituted for the broad cultural spirit of the French and Italian schools.

Sturm was the greatest and most successful schoolman of his day. In clearly defined aim, thorough organization, carefully graded instruction, good teaching, and sound scholarship, his school surpassed all others. Sturm's aim was to train pious, learned, and eloquent men for service in Church and State, using religion and the new learning as means, and in this he was very successful. In a short time after taking charge his *gymnasium*

[1] Melanchthon, in his famous Saxony plan of 1528, had provided for but three classes (R. 161). The class-for-each-year idea was new in German lands.

[2] This became a fixed practice, Latin being the one language of the school. A century later, when it was attempted by the Jansenists, in France, to teach Greek directly through the vernacular, the practice was loudly condemned by the Jesuits as impious, because it broke the connection between France and Rome.

had six hundred pupils, and in 1578 there were "thousands of pupils, representing eight nations," in attendance. Sturm became widely known throughout northern Europe, and scholars and princes passing through Strassburg stopped to visit his school and secure his advice. He corresponded with scholars in many lands, and the influence of his institution was enormous. He was the author of many school textbooks, and of half a dozen works on the theory and practice of education. He fixed both the type and the name — *gymnasium* — of the German classical secondary school, which to-day is not very materially changed from the form and character which Sturm gave it. Sturm's work deeply influenced many later foundations in Germany, and also helped to mould the educational system devised later on by the Jesuits.



FIG. 82. DESIDERIUS ERASMUS (1467–1536)

A contemporary portrait by the German artist, Hans Holbein the Younger, in the Louvre, Paris

Humanism in England. Grocyn, Linacre, and Colet had introduced the new learning at Oxford, as we have already seen (p. 253), in the closing years of the fifteenth century (**R. 133**), but had made but little impression. They were ably seconded by Erasmus, who taught Greek at Cambridge (1510–14), and who labored hard to substitute true classical culture for the poor Latin and the empty scholasticism of his time. He wrote textbooks [1] to help introduce the new learning, urged the importance of history, geography, and science as serving to elucidate the classics, edited editions of the classical authors,

[1] His phrase book, *De Copia Verborum et Rerum*, went through sixty editions in his lifetime, and was popular for a century after his death. His book of proverbs, the *Adagia*, was in both Latin and Greek, and was widely used. His Book of Sayings from the Ancients (*Apophthegmata*) was a collection of little stories, much like some of our best modern books for elementary-school use. His *Colloquies*, or Latin dialogues, were widely used for two centuries in Protestant countries. These four were written between 1511 and 1519, and largely for use in Saint Paul's School. His Latin edition of Theodorus Gaza's Greek Grammar (1516) gave English schools for the first time a standard text.

wrote two treatises of importance on education,[1] and in two other books[2] ridiculed those who mistook the form for the spirit of the ancient learning. His Latin Greek edition of the New Testament definitely fixed the place of the New Testament in the humanistic schools.

In spite of the opposition of monks and scholastics in the universities of Oxford and Cambridge, and in the face of the coming religious turmoil in the days of Henry VIII, the new learning made steady progress in the universities,[3] with the court, and among the scholars and statesmen of the time. With the coming of Elizabeth to the throne,[4] in 1558, the court, from the Queen down, was imbued with the spirit of the new learning (**R. 139**). Elizabeth appointed new chancellors for the two universities, and these institutions were soon transformed from places for the training of mediæval scholars and theologians into places for the production of a "due supply of fit persons to serve God in Church and State." As Sir Thomas Elyot so well expressed it, in his *The Governour* (1544) — a book on the education of rulers for a State, and which was permeated by the new spirit — "the new political order requires qualified instruments for its administration, and a trained governing class must henceforth take the place of the privileged caste and the clerk [cleric] education under the mediæval disciplines."

Colet and Saint Paul's School. The first real establishment of the new learning in England came through the secondary schools, and through the refounding of the cathedral school of Saint Paul's, in London, by the humanist John Colet, in 1510. Colet had become Dean of Saint Paul's Church, and Erasmus urged him to embrace the opportunity to reconstruct the school along humanistic lines. This he did, endowing it with all his wealth, and in a series of carefully drawn-up Statutes (**R. 138**), which were widely copied in subsequent foundations, Colet laid special emphasis on the school giving training in the new learning and in

[1] They were *On the First Liberal Education of Children* (1529), and *On the Order of Study* (1511).

[2] His *Praise of Folly* (1509), and his *Ciceronian* (1528).

[3] The introduction of the new learning into the English universities was easier than elsewhere, because the English universities had broken up into groups of residence halls, known as *colleges*. If the old colleges could not be reformed new ones could be created, and this took place. Trinity College, at Cambridge, founded in 1540, was from the first a center of humanistic studies. That same year the King founded royal professorships of Civil Law, Hebrew, and Greek at Cambridge.

[4] Elizabeth *had had for her tutor* Roger Ascham, author of The Scholemaster, and *a teacher of Greek at Cambridge* (**R. 139**).

Christian discipline. Erasmus gave much of his time for years to finding teachers and writing textbooks for the school. William Lily (1468–1522), another early humanist recently returned from study in Italy, and the author of a widely known and much used textbook [1] — *Lily's Latin Grammar* (**R. 140**) — was made headmaster of the school.

The course of study was of the humanistic type already described, coupled with careful religious instruction. In place of

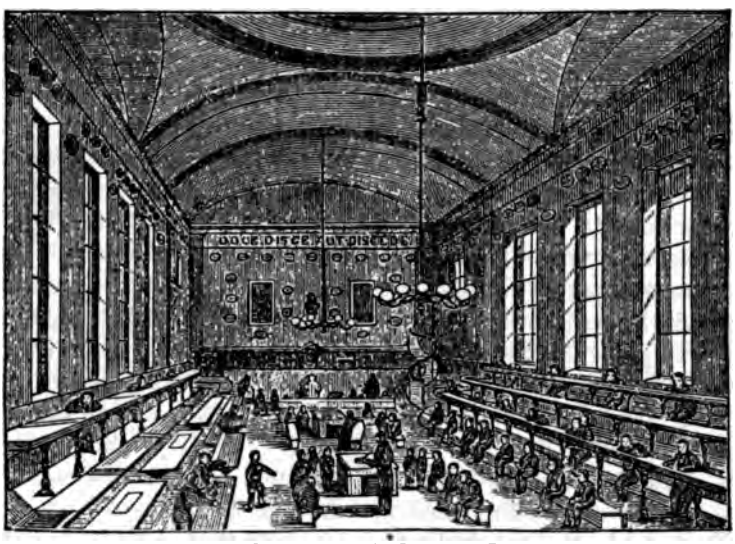


FIG. 83. SAINT PAUL'S SCHOOL, LONDON

the monkish Latin pure Latin and Greek were to be taught, and the best classical authors took the place of the old mediæval disciplines. The school met with much opposition, was denounced as a temple of idolatry and heathenism by the men of the old schools, and even the Bishop of London tried twice to convict Colet of heresy and suppress the instruction. Notwithstanding this the school became famous for its work, not only in London but throughout England. From its desks came a long line of capable statesmen, learned clergy, brilliant scholars, and literary men.

[1] For generations this famous grammar was to England what Donatus was to mediæval Europe. It was also used in the grammar schools of New England. Lily visited Jerusalem and studied under the best Latin teachers in Rome, so that he ranks with Linacre, Grocyn, and Colet as an introducer of classical culture into England.

Influence on other English grammar schools. In a preceding chapter (p. 152) we mentioned the founding of many English grammar schools after 1200. At the time Saint Paul's School was refounded there were something like three hundred of these, of all classes, in England. They existed in connection with the old monasteries, cathedrals, collegiate churches, guilds, and charity foundations in connection with parish churches, while a few were due to private benevolence and had been founded independently of either Church or State. The Sevenoaks Grammar School, founded by the will of William Sevenoaks, in 1432 (**R. 141**), and for which he stated in his will that he desired as master "an honest man, sufficiently advanced and expert in the science

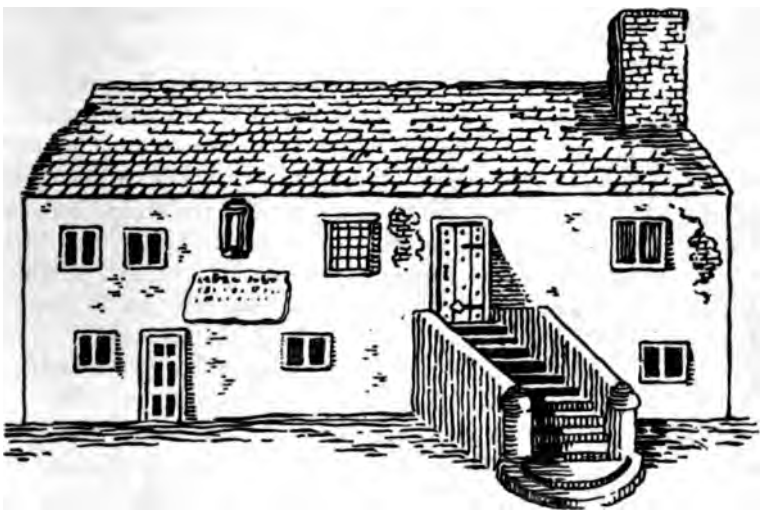


FIG. 84. GIGGLESWICK GRAMMAR SCHOOL

One of the chief schools of Yorkshire, England, and dating back to 1499. This building was erected in 1507–12 by a chantry priest named James Cair (Ker). Drawn from an old print. On the front of the building was a Latin tablet (shown in the drawing), now in the British Museum, which, translated, read: "Kindly mother of God, defend James Ker from ill. For priests and young clerks this house is made, in 1512. Jesus, have mercy on us. Old men and children praise the name of the Lord."

of Grammar, B.A., by no means in holy orders," and the chantry grammar school founded by John Percyvall, in 1503 (**R. 142**), are examples of the parish type. The famous Winchester Public School, founded by Bishop William of Wykeham, in 1382, to emphasize *grammar, religion,* and manners, and to prepare seventy

scholars for New College, at Oxford,[1] where they were to be trained as priests; and Eton College, founded by Henry VI, in 1440, to prepare students for King's College, at Cambridge, are examples of the larger private foundations. A few, such as the grammar school at Sandwich (1579), owed their origin (**R. 143**) to the initiative of the city authorities. Most of these grammar schools were small, but a few were large and wealthy establishments.

These old foundations, with their mediæval curriculum, after a time began to feel the influence of Colet's school. Within a century, due to one influence or another, practically all had been remodeled after the new classical type set up by Colet. In the course of study given for Eton (**R. 144**), for 1560, we see the new learning fully established, and in the course of study for a small country grammar school, in 1635 (**R. 145**), we see how fully the new learning, with its emphasis on Latin as a living language, had by this time extended to even the smallest of the English grammar schools. The new foundations, after 1510, were almost entirely new-learning grammar schools, with large emphasis on grammar, good Latin and Greek, games and sports, and the religious spirit. One of the most conspicuous of these later foundations was Merchant Taylor's School,[2] founded in London in 1561, and of which Richard Mulcaster (1531–1611), the author of two important books on educational theory,[3] was for long the headmaster. The first American Latin grammar school (Boston, 1635) was a direct descendant of these English influences and traditions.

The reaction against mediævalism. Having traced the introduction of the new learning by countries, it still remains to point out certain significant educational features of the movement

[1] Winchester was the first of the so-called "great public schools" of England, of which Eton, Saint Paul's, Westminster, Harrow, Charterhouse, Rugby, Shrewsbury, and Merchant Taylors' are the other eight. The foundation statutes of Winchester made elaborate provision for "a Warden, a Head Master, ten Fellows, three Chaplains, an Usher, seventy scholars, three Chapel Clerks, sixteen Choristers, and a large staff of servants," as did Henry VIII later on for Canterbury (**R. 172 a**). The Warden and Fellows were the trustees. In addition to the seventy scholars (Foundationers) other non-foundationers (Commoners) were to be admitted to instruction. The admission requirements were to be "reading, plain song, and Old Donatus," and the school was to teach Grammar, the first of the Liberal Arts. Except for the change in the nature of the instruction when the new learning came in, this and the other "public schools" remained almost unchanged until the second half of the nineteenth century.

[2] Statutes for this school had provided the following entrance regulations: "But first see that they can the Catechisme in English or Latyn, that every one of the *said two hundred & fifty* schollers can read perfectly & write competently, or els *lett them not be admitted* in no wise."

[3] *His The Positions* (1581), and *The Elementarie* (1582). See Chapter XVIII.





PLATE 2. STRATFORD-ON-AVON GRAMMAR SCHOOL

Established by the Holy Cross Guild of Stratford-on-Avon, at the beginning of the fifteenth century. The Grammar School was built in 1426, of wood, and at a cost of £10, 5s., 3½*d.* The stone guild-chapel to the left is older. The school was held on the upper floor, the lower being used as a guild-hall. Here Shakespeare went to school, and saw companies of strolling players in the hall below. The lower picture shows the grammar-*school room after its* "restoration," in 1892.



which were common in all lands, and which profoundly modified subsequent educational practice. Both the purpose and the method of education were permanently changed.

Up to about the middle of the fourth Christian century the aim of both Greek and Roman education had been to prepare men to become good and useful citizens in the State. Then the Church gained control of education, and for a thousand years the chief object was to prepare for the world to come. Success and good citizenship in this world counted for little, religious devotion took the place of the old state patriotism, the salvation of souls took the place of the promotion of the social welfare, and the aim and end of life here was to attain everlasting bliss in the world to come. To be able to appease the dread Judge at the Day of Judgment, prayer, penance, and holy contemplation were the important things here below. It was preëminently the age of the self-abasing monk, and this mental attitude dominated all thinking and learning.

The spirit behind the Revival of Learning was a protest against this mediæval attitude, and the protest was vigorous and successful. The Revival of Learning was a clear break with mediæval traditions and with mediæval authority. It restored to the world the ideals of earlier education — self-culture, and preparation for usefulness and success in the world here. In Italy, France, Germany, and England the movement, too, met with the most thorough approval from modern men — merchants, court officials, and scholars who were ready to break with the mediæval type of thinking. The court and other types of secondary schools now established were popular with the higher classes in society, and this aristocratic stamp the humanistic schools and courses have ever since retained. These schools restored to the world the practical education of the days of Cicero, and preparation for intelligent service in the Church, State, and the larger business life became one of their important purposes. Supported as they were by the ruling classes, the new schools were close to the most progressive forces in the national life of the different countries. They represented an unmistakable reaction against the world of the mediæval monk and the Scholastic, and their early success was in large part because of this.

Modification of the mediæval curriculum. The mediæval curriculum, as we have seen (chap. VII), was based on instruction in the *Seven Liberal Arts*. Grammar at first was the great sub-

ject, but later Dialectic became the master science. Knowledge was regarded as an organic whole, capable of being stated in a brief encyclopædia, and each man could learn it all. With the rise of university instruction some new knowledge was added, chiefly from Moslem sources, and the old knowledge was minutely re-ground. With the revival of the ancient learning there came, within a little more than a century, an enormous increase in the world's sum of knowledge, and the invention of printing came just in time to multiply and scatter this new knowledge throughout western Europe. To all the old subjects a new wealth of detail was added which made teaching encyclopædias impossible. New purposes in education now came to prevail, and the great mediæval teaching curriculum was changed in content and in relative importance.

Of the subjects in the old *Trivium*, Dialectic or Logic, which Scholastics had raised to the place of first importance, was dethroned, and relegated to a minor position in university instruction. In its place Grammar, as Quintilian knew and used the term (**R. 76**) and as based on and including Literature, was raised once more to the place of first importance. Out of this, Literature — at first the classical and later the modern — later came as a separate study, as did also the study of History and Mythology. By the latter part of the sixteenth century technical Grammar had been separated from Literature, and made a more elementary subject, while Rhetoric had developed into a critical study of literary art. Of the subjects of the *Quadrivium*, Arithmetic, Geometry, and Astronomy were each greatly expanded, as a result of the introduction of much new knowledge, and each was reduced to textbook form, while Algebra and Trigonometry were now organized as teaching subjects. Due to their newness and difficulty these subjects were taught chiefly in the universities. There they remained for a long time before being passed down to the secondary schools. Out of the very elemental instruction given in Geography and Astronomy were in time evolved all the biological and physical sciences, though this development belongs to a later chapter (XVII), and these new subjects did not reach the secondary schools until well into the nineteenth century. The last of the quadrivial subjects, Music, experienced a different history in different countries. In the Germanic countries it continued to receive its old emphasis, while in England and France much less was made of it. After the setting-in of Puritanism

		Early Middle Ages	*Later Middle Ages*	*Period of the Revival of Learning*	*Later evolution*
THE SEVEN LIBERAL ARTS	TRIVIUM	GRAMMAR	Grammar	GRAMMAR	Grammar LITERATURE History Mythology
		Rhetoric	Rhetoric	*Rhetoric*	*Rhetoric*
		Dialectic	DIALECTIC	Dialectic	Logic (To Univs.)
	QUADRIVIUM	Arithmetic	Arithmetic	Arithmetic	Arithmetic Algebra
		Geometry	Geometry Geography	Geometry Geography	Geometry Trigonometry Geography Botany, Zoölogy
		Astronomy	Astronomy Physics	Astronomy Physics	Astronomy, Mechanics Physics, Chemistry
		MUSIC	MUSIC	In Teutonic Countries — *Music* In English Countries — ?	

FIG. 85. THE EVOLUTION OF MODERN STUDIES

The great study of each period is in CAPITALS; subjects in *italics* indicate that they also were quite important. Least important subjects in ordinary type

in England, when music was regarded with great disfavor, it in large part passed out of the English curriculum. As a result the Germanic and Scandinavian nations are to-day singing nations, while the English and American are not. In early America, in particular, was the religious reaction against music especially strong.

New teaching methods. Such important changes naturally called for a progressively evolving series of printed textbooks, and these now came fast from the presses. The day of one textbook, which could dominate all instruction for hundreds of years, was over forever. A few books, such as Lily's or Melanchthon's Latin grammars and the textbooks of Erasmus, were still used for a long time, but throughout the sixteenth century, before the schools became formalized and lost their earlier purpose, each textbook issued was soon superseded by a better one. The invention of printing, too, changed teaching from a reading-by-the-professor to a textbook method, and tremendously shortened the time necessary to give instruction in any subject. With the manufacture of paper the written theme, too, displaced the dis-

putation, with great gains in accuracy of thinking and refinement in the use of words. It was still the Latin theme or verse or oration, to be sure, and the object of the new instruction was to teach Latin as a living language, but before long the time was to come when the same methods would be transferred to instruction in the native tongues and for national ends.

To make the instruction as practical as possible, and thus prepare the pupils for service as Latin scholars in public or scholarly pursuits, the ancient literature was studied in part as a storehouse of adequate and elegant expression, and numerous phrase books [1] were written for use in the schools. When we remember that Latin was still the language of all learned literature, of the university classroom, of most diplomatic and legal documents, and a practical necessity for travel or communication abroad, we can realize why so much emphasis was placed on the constant use of Latin as the language of the school.[2] As Leach [3] so well puts it:

> The learned professions required a competent knowledge of Latin far more directly then than now. A need for Latin was not confined to the Church and the priest. The diplomatist, the lawyer, the civil servant, the physician, the naturalist, the philosopher, wrote, read, and to a large extent spoke and perhaps thought in Latin. Nor was Latin only the language of the higher professions. A merchant, or a bailiff of a manor, wanted it for his accounts; every town clerk or guild clerk wanted it for his minute book. Columbus had to study for his voyages in Latin; the general had to study tactics in it. The architect, the musician, every one who was neither a mere soldier nor a mere handicraftsman, wanted, not a smattering of grammar, but a living acquaintance with the tongue, as a spoken as well as a written language.

The schools become formal. After the new learning had obtained a firm footing in the schools there happened what has often

[1] Solomon Lowe, in his Grammar, published in 1726, gives a bibliography of 128 *Phrase Books* which had appeared by that time. The following selection from the *Colloquies* of Corderius (**R. 136**) illustrates their nature:

Col. 7. Clericus, The Master.	*Col. 7. Clericus, Magister.*
C. Master, may not I and my uncle's son go home?	Licetne, Magister, ut ego & patruélis eámus domom?
M. To what end?	Quid eó?
C. To my sister's daughter's wedding.	Ad nuptias consobrinæ.
M. When is she to be married?	Quando est nuptura?
C. To-morrow.	Crástino die.
M. Why will you go so quickly?	Cur tam citò vultis ire?
C. To CHANGE OUR CLOATHS.	*Ut mutémus vestimenta.*

[2] Sturm, Trotzendorf, and Neander insisted on the use of Latin in all conversation in the school, and the Jesuits later on subjected boys to a whipping if reported *as having used the* vernacular.

[3] *Leach, A. F., English Schools at the Reformation*, p. 105.

happened in the history of new educational efforts — that is, the new learning became narrow, formal, and fixed, and lost the liberal spirit which actuated its earlier promoters. In the beginning the Italian humanists had aimed at large personal self-culture and individual development, and the northern humanists at moral and religious reform and preparation for useful service, both using the classics as a means to these new ends. After about 1500 in Italy, and 1600 in the northern countries, when the new-learning schools had become well established and thoroughly organized, the tendency arose to make the means an end in itself. Instead of using the classical literatures to impart a liberal education, give larger vision, and prepare for useful public service, they came to be used largely for disciplinary ends. The teaching of Campion at Prague (1574) well illustrates this degeneracy (**R. 146**). This change alienated practical men from the schools. French now in turn became the language of the court and of diplomacy, and the work of the schools tended to be confined largely to preparing students to enter the universities or the service of the Church. Men of the world hence turned to a new type of schools which now arose (chapter XVII), and which made preparation for social efficiency in a modern world their aim.

In consequence the aim of the new humanistic education came in time to be thought of in terms of languages and literatures, instead of in terms of usefulness as a preparation for intelligent living, and educational effort was transferred from the larger human point of view of the early humanistic teachers to the narrower and much less important one of mastering Greek and Latin, writing verses, and cultivating a good (Ciceronian) Latin style. Sturm's school at Strassburg clearly shows the beginnings of such a transformation (**R. 137**). As Latin came to be less and less used by scholars in writing, passed out of use as the language of government and of international communication, was replaced by French as the language of polite society, and was gradually superseded in the university lecture room by the vernaculars, the practical motive for learning Latin died out, except for service in the Church, and the disciplinary and cultural value of the study of the classics alone remained. The disciplinary, being easier to give, and better within the understanding of most teachers, gradually won over the cultural. As a result, classical education gradually became narrow and formal, and drill in composition and declamation and imitation of the style of ancient authors —

particularly Cicero, whence the term "Ciceronianism" which came to be applied to it — grew to be the ruling motives in instruction. By the end of the sixteenth century this change had taken place in both the secondary schools and the universities, and this narrow linguistic attitude continued to dominate classical education, in German lands until the mid-eighteenth, and in all other western European countries and in America until near the middle of the nineteenth century. It was not until vigorously challenged by the enthusiasts for modern scientific studies that the teachers of the classics awoke to the need of improving their instruction and restoring something of the old cultural value to what they were teaching.

The new learning in northern and western Europe was also much changed in character by the violent religious dissensions, following the Protestant Revolt, to a consideration of which we next turn.

QUESTIONS FOR DISCUSSION

1. Explain just what is meant by the statement that mediæval education was narrowly technical.
2. State the educational ideals of the new secondary schools evolved by the Italian humanistic scholars, and show whether these ideals have been best embodied in the German *gymnasium* or the English grammar school.
3. How do you explain the merchants and bankers and princes of Italy being more interested in the revival-of-learning movement than the Church and university scholars? Do such classes to-day show the same type of interest in aiding learning?
4. What was the particular importance of the recovery of Quintilian's *Institutes?* Of Cicero's *Orations* and *Letters?*
5. What better methods could the Italian court schools have used to enable them to cover the university Arts course in shorter time? How would this have advanced the character of the instruction in Arts in the university?
6. Show how the type of education developed in the Italian court schools was superior to that of the best of the cathedral schools. To that developed by Sturm.
7. Show how the new type of secondary schools was naturally associated with court and nobility and men of large worldly affairs, and how in consequence the new secondary education became and for long continued to be considered as aristocratic education.
8. Explain how the terms *college, lycée, gymnasium, academy,* and *grammar school* all came to be employed, in different countries, to designate about the same type of secondary school.
9. Had the purified Latin been restored, as the general international language of learning and government, would it have helped materially in bringing about the civilizing influences Erasmus saw in it?
10. Has the development of separate nationalities and different national *languages* aided in advancing international peace and civilization? *Why?*

11. Why should the new humanistic studies have developed religious fervor in Germany and England, in place of the patriotic fervor of the Italian scholars?
12. Was the struggle against the introduction of the new learning into the German universities parallel to the late struggle against the introduction of science into American universities?
13. Contrast the aim of Sturm's school with that of the Italian court schools, and the English grammar schools. Point out the new tendencies in his work.
14. Does the sentence quoted from Elyot's *Governour* express well the changed conditions in England at the middle of the sixteenth century? Do such changed conditions always demand educational reorganizations?
15. What basis, if any, did the opponents of Colet's school have for denouncing it as a temple of idolatry and heathenism?
16. Show how it was natural that the first American school should have been a Latin grammar school in type.
17. Show that the new conception as to education, as expressed by the new humanism, found a public ready to support it. What was the nature of this public?
18. Show how the new schools were "close to the most progressive forces in the national life," and the influence of this, particularly in England and America, in fixing classical training as the approved type of secondary education.
19. Explain how the written theme of to-day is the successor of the mediæval disputation.
20. Show how the methods of instruction employed in the new Latin grammar schools have been passed over to the native-language schools.
21. From the paragraph quoted from Leach (p. 282), explain why a knowledge of Latin was for so long regarded as synonymous with being educated.
22. Show how instruction in Latin, by being changed from cultural to disciplinary ends, made French the language of diplomacy and society, tended to elevate all the vernacular tongues, and marked the beginnings of the end of the importance of Latin as a school study except for the purposes of the Roman Catholic Church.
23. What was the purpose of the Latin instruction, as you received it?
24. Does it require a higher quality of teaching to impart the cultural aspect of a study than is required for the disciplinary?

SELECTED READINGS

In the accompanying *Book of Readings* the following selections are reproduced:

135. Guarino: On Teaching the Classical Authors.
136. Vinet: The Collège de Guyenne at Bordeaux.
137. Sturm: Course of Study at Strassburg.
138. Colet: Statutes for St. Paul's School, London.
 (*a*) Religious Observances.
 (*b*) Admission of Children.
 (*c*) The Course of Study.
139. Ascham: On Queen Elizabeth's Learning.
140. Colet: Introduction to Lily's Latin Grammar.
141. William Sevenoaks: Foundation Bequest for Sevenoaks Grammar School.
142. *John Percyvall: Foundation* Bequest for a Chantry Grammar School.

143. Sandwich: A City Grammar School Foundation.
144. Eton: Course of Study in 1560.
145. Martindale: Course of Study in an English Country Grammar School.
146. Simpson: Degeneracy of Classical Instruction.

QUESTIONS ON THE READINGS

1. Show the large scope of Grammar, as outlined by Guarino (135).
2. How generally was his dictum that a knowledge of Latin and Greek were essential for a well-educated gentleman (135) accepted?
3. Compare the course of study in Sturm's school (137) with that at Bordeaux (136), and with that at Eton (144) a little later.
4. From Ascham's statements (139), what do you infer as to the reception of the new learning at the English court?
5. Show how Colet (138 a) and William Sevenoaks (141) both aimed to provide for real teachers, specialized for the service, and not for teaching as an adjunct to priestly duties. What was the significance of these provisions?
6. Show that Colet (138 b) desired to train leaders, rather than followers.
7. Show that he clearly provided (138 c) for a humanistic school of the reformed type.
8. Characterize Colet's Introduction to Lily's Grammar (140).
9. What was the educational significance of such a bequest as that of William Sevenoaks (141)?
10. What did the founding of a chantry grammar school (142), instead of a song school, indicate as to the progress of education?
11. Would the action taken by the authorities of the City of Sandwich (143) indicate that the humanistic grammar school had taken a deep hold on English thought, or not? The same with reference to the course given in a small English country grammar school, as described by Martindale (145)?
12. Just what does the instruction described as given by Campion (146) indicate?

SUPPLEMENTARY REFERENCES

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CHAPTER XII

THE REVOLT AGAINST AUTHORITY

The new questioning attitude. The student can hardly have followed the history of educational development thus far without realizing that a serious questioning of the practices and of the dogmatic and repressive attitude of the omnipresent mediæval Church was certain to come, sooner or later, unless the Church itself realized that the mediæval conditions which once demanded such an attitude were rapidly passing away, and that the new life in Christendom now called for a progressive stand in religious matters as in other affairs. The new life resulting from the Crusades, the rise of commerce and industry, the organization of city governments, the rise of lawyer and merchant classes, the formation of new national States, the rise of a new "Estate" of tradesmen and workers, the new knowledge, the evolution of the university organizations, and the discovery of the art of printing — all these forces had united to develop a new attitude toward the old problems and to prepare western Europe for a rapid evolution out of the mediæval conditions which had for so long dominated all action and thinking. This the Church should have realized, and it should have assumed toward the progressive tendencies of the time the same intelligent attitude assumed earlier toward the rise of scholastic inquiry. But it did not, and by the fifteenth century the situation had been further aggravated by a marked decline in morality on the part of both monks and clergy, which awakened deep and general criticism in all lands, but particularly among the northern peoples.

The Revival of Learning was the first clear break with mediævalism. In the critical and constructive attitude developed by the scholars of the movement, their renunciation of the old forms of thinking, the new craving for truth for its own sake which they everywhere awakened, and their continual appeal to the original sources of knowledge for guidance, we have the definite beginnings of a modern scientific spirit which was destined ultimately to question all things, and in time to usher in modern conceptions and modern ways of thinking. The authority of the mediæval Church *would be questioned,* and out of this questioning would

come in time a religious freedom and a religious tolerance unknown in the mediæval world. The great world of scientific truth would be inquired into and the facts of modern science established, regardless of what preconceived ideas, popular or religious, might be upset thereby. The divine right of kings to rule, and to dispose of the fortunes and happiness of their peoples as they saw fit, was also destined to be questioned, and another new "Estate" would in time arise and substitute, instead, in all progressive lands, the divine right of the common people. Religious freedom and toleration, scientific inquiry and scholarship, and the ultimate rise of democracy were all involved in the critical, questioning, and constructive attitude of the humanistic scholars of the Renaissance. These came historically in the order just stated, and in this order we shall consider them.

Humanism became a religious reform movement in the North. In Italy the Revival of Learning was classical and scientific in its methods and results, and awakened little or no tendency toward religious and moral reform. Instead it resulted in something of a paganization of religion, with the result that the Papacy and the Italian Church probably reached their lowest religious levels at about the time the great religious agitation took place in northern lands. In the latter, on the contrary, the introduction of humanism awakened a new religious zeal, and religious reform and classical learning there came to be associated almost as one movement. In England, Germany, the Low Countries, and in large parts of northern France, the new learning was at once directed to religious and moral ends. The patriotic emotions roused in the Italians by the humanistic movement were in the northern countries superseded by religious and moral emotions, and the constant appeal to sources turned the northern leaders almost at once back to the Church Fathers and the original Greek and Hebrew Testaments for authority in religious matters.

Colet, from England, who had spent the years 1493–96 in Florence (p. 254), during the period when Savonarola (1452–98) was preaching moral reform there, returned home, not only a humanist, but a religious reformer as well, and began to lecture at Oxford on the Epistles of Saint Paul in the Greek. Linacre, Grocyn, Colet, Erasmus, and Sir Thomas More (author of *Utopia*), among others, formed a little group of humanists all of whom were also deeply interested in a reform of the practices of the Church. Erasmus, in particular, labored hard by his writings to

remove religious abuses. His *Colloquies* (1519), a widely used Latin reading book, was banned from the classrooms of the University of Paris (1528), and forbidden to be used in Catholic lands by the Church Council of Trent (1564), because of the way in which it held up to ridicule the abuses in the Church, the superstitions of the age, and the immoralities in the lives of the monks and clergy. His work as Professor of Divinity at Cambridge, his numerous editions of the writings of the Church Fathers, and his Latin-Greek edition (1516), of the New Testament [1] all alike tended to turn theological scholars back to the original sources instead of to the scholastics for the foundations of their religious faith. In Germany such men as Hegius (p. 271), Reuchlin (p. 254), and Melanchthon (p. 270) began, by similar methods, to go back to Greek and Hebrew sources and to the Church Fathers for new interpretations as to religious doctrines. In so doing they discovered that many practices and demands of the Church, all of which had grown up during the long mediæval period, were not in harmony with the earlier teachings of Christ, the Apostles, or the early Fathers. In France, Jacques Lefèvre (c. 1455–1536), a humanist and a pioneer Protestant, contended for the rule of the Scriptures and for justification by faith, and translated the Bible into the French (New Testament, 1523; complete, 1530) that the people might read it.

Evolution or revolution. The reaction against the mediæval dogmas of the Church and the demand by the humanists of the North for a return to the simpler religion of Christ gradually grew, and in time became more and more insistent. This demand was not something which broke out all at once and with Luther, as many seem to think. Had this been so he would soon have been suppressed, and little more would have been heard of him. Instead, the literature of the time clearly reveals that there had been, for two centuries, an increasing criticism of the Church, and

[1] Up to this time the only Latin Bible had been the *Vulgate* (p. 131), translated by Jerome in the fourth century. Erasmus went back to and edited the original Greek manuscripts, and then prepared a new parallel Latin translation, the two being printed side by side. He also added many explanations of his own which mercilessly exposed the mistakes of the theologians and the Church, and pointed out the errors in translation which were embodied in the *Vulgate*. This work passed through numerous editions and sold in thousands of copies all over Europe.

So dangerous was this comparative method that "Greek was judged a heretical tongue. No one should lecture on the New Testament, it was declared, without a previous theological examination. It was held to be heresy to say that the Greek or Hebrew text read thus, or that a knowledge of the original language is necessary to interpret the *Scriptures correctly*."

a number of local and unsuccessful efforts at reform had been attempted. The demand for reform was general, and of long standing, outside of Italy and southern France. Had it been heeded probably much subsequent history might have been different. A few of the more important attempts at reform may be mentioned here, as a background for our study.

The first organized revolt against the Church occurred in southern France, in the early thirteenth century, and the revolters (*Albigenses*) were so fearfully punished by fire and sword that it was not attempted there again.

In 1378 there was a disputed papal election, and for nearly forty years there were two Popes, one at Rome, and one at Avignon in southern France, each attempting to control the Church and each denouncing the other as Antichrist. The discussions which accompanied this "Great Schism" did much to weaken the authority of the Church in all Christian lands.



FIG. 86. JOHN WYCLIFFE (1320?–84)
A popular English preacher
(Drawn from an old print)

In England a popular preacher and Oxford divinity graduate by the name of John Wycliffe was led, by the sad condition of the Church there, to a careful study of the Bible. He came to the conclusion that many of the claims of the Popes and many practices of the Church were wrong (R. 147), and he refused to accept teachings of the Church for which he could not find sanction in the Bible. His revolt was as direct and vigorous as that of Luther, in German lands, a century and a half later (R. 148). So great was his zeal for reform that he and his scholars attempted a translation of the Bible [1] into English (see Figure 93),

[1] This was accomplished between 1382 and 1384. Wycliffe translated only a part of the Old Testament, and the Gospels of Saint Matthew and Saint Mark of the New. The remainder was done under his direction by others. The translation was from the Latin *Vulgate*, and was crude and imperfect. The large number of copies of parts of this translation which have survived, in manuscript form, to the

that the people might read it, and he and his followers (called *Lollards*) went about the country teaching what they believed to be the true Christianity. What had before in England been a widespread but undefined feeling of disaffection for the rich and careless clergy and monks, the work of Wycliffe organized into a political and social force.

Due to the then close connection of the English and Bohemian courts, through royal marriages, Wycliffe's teachings were carried to Bohemia, where a popular preacher and university theologian by the name of John Huss (1373–1415) expounded them. He denounced the evil conduct of the clergy, and he and his followers tried to introduce several new customs into the Church. For this Huss was first excommunicated, and then burned at the stake as a dangerous heretic.[1] After a series of terrible massacres his followers were forced, in large part, to accept once more the old system.



FIG. 87. RELIGIOUS WARFARE IN BOHEMIA

Sacking a village in true German style
(From a picture in the Germanic Museum at Nuremberg)

In 1414 a Council of the Church was called at Constance, in Switzerland, to heal the papal schism, and this Council made a serious attempt at church reform. After reuniting the Church under one Pope, it drew up a list of abuses which it ordered remedied (R. 149). It also attempted to establish a democratic form of organization for the government of the Church, with Church Councils meeting from time to time to

present time show that it must have awakened much interest, and been widely copied and recopied during the century before the invention of printing.

[1] The heretic, it should be remembered, was the anarchist of the Middle Ages. The Church regarded heresy as a crime, worthy of the most severe punishments. The Church and the civil governments proceeded against the heretic as against an enemy of society and order. Heretics could not give evidence in a civil court, were prohibited from marrying or from giving a son or daughter in marriage, and even to speak with a heretic was an offense. Even torture and death were regarded as justified *to stamp out heresy.*

There were special reasons why the trouble, when once it broke, made such rapid headway in German lands. The Germans had a long-standing grudge against the Italian papal court, chiefly because it had for long been draining Germany of money to support the Italian Church. Germany's greatest minnesinger, Walther von der Vogelweide (1170–1228), three centuries before Luther had sung to the German people how the Pope made merry over the stupid Germans.

> "All their goods will be mine,
> Their silver is flowing into my far-away chest;
> Their priests are living on poultry and wine,
> And leaving the silly layman to fast."

Many positions in the German Church had been filled by the Pope with Italians, who not infrequently drew the perquisites, but did not reside in Germany. The princely and feudal Archbishops of Mayence, Treves, Cologne, and Salzburg, with their fortified castles and lands and troops and large governmental powers, frequently proved to be serious sources of irritation. The most widespread discontent, though, arose over the heavy church taxation, which drained the money of the people to Italy. The whole German people, from the princes down to the peasants, felt themselves unjustly treated, that the German money which flowed to Rome should be kept at home, and that the immoral and inefficient clergy should be replaced by upright, earnest men who would attend better to their religious duties (**R. 150**). It was these conditions which prepared the Germans for revolt, and enabled Luther to rally so many of the princes and people to his side when once he had defied authority.

The German revolt. The crisis came over the sale of indulgences for sins by the papal agent, Tetzel, who began the practice in the neighborhood of Wittenberg, where Luther was a Professor of Theology, in 1516. There is little doubt but that Tetzel, in his zeal to raise money for the rebuilding of the church of Saint Peter's at Rome, a great undertaking then under way, exceeded his instructions and made claims as to the nature and efficacy of indulgences which were not warranted by church doctrines. Such would be only human. The sale, however, irritated Luther, and he appealed to the Archbishop of Magdeburg to prohibit it. Failing to obtain any satisfaction, he followed the old university

company. One is content to be known as a conservative or a conformer; the other *delights in being classed* as a progressive or even as a radical.

custom, made out ninety-five theses, or reasons, why he did not believe the practice justifiable, detailed the abuses, set forth what he conceived to be the true Christian doctrine in the matter, and challenged all comers to a debate on the theses (R. 151). Following true university custom, also, these theses were made out in Latin, and in October, 1517, Luther followed still another university custom and nailed them to the church door in Wittenberg. Luther was probably as much surprised as any one to find that these were at once translated into German, printed, and in two weeks had been scattered all over Germany. Within a month they were known in all the important centers of the Western Christian world. They had been carried everywhere on the currents of discontent. Luther at first intended no revolt from the Church, but only a protest against its practices. From one step to another, though, he was gradually led into open rebellion, and finally, in 1520, was excommunicated from the Church. He then expressed his defiance by publicly burning the bull of excommunication, together with a volume of the canon law. This was open rebellion, and such heresy (R. 152) must needs be stamped out. Luther took his stand on the authority of the Scriptures, and the battle was now joined between the forces representing the authority of the Church *versus* the authority of the Bible, and salvation through the Church *versus* salvation through personal faith and works.[1] Luther also forced the issue for freedom of thought in religious matters. It was, to be sure, some three centuries before freedom in religious thinking and worship became clearly recognized, but what the early university masters and scholars had stood for in intellectual matters, Luther now asserted in religious affairs as well.

We do not need to follow the details of the conflict. Suffice it to know that great portions of northern and western Germany followed Luther, as is shown in Figure 88, and that the Western Church, which had remained one for so many centuries and been

[1] "The early Protestant theory was that an individual's Christian religious life, convictions, and salvation were to be worked out through a direct study of the Scriptures, acceptance of the obvious teachings of Christ as there presented, and direct appeal to God through prayer for help in leading a Christian life. The Catholic position, on the other hand, came to be that the individual's religious life was to be achieved through the intervention of the Church, which claimed on historical grounds to have been founded by Christ, and to be his official representative and mediator in the world. It was through the teachings of this Church that the individual was to receive his ideas of the Christian religion, to be stimulated to believe these, to be kept in the path of righteousness, and to obtain salvation." (Parker, S. C., *History of Modern Elementary Education*, p. 35.)

the one great unifying force in western Europe, was permanently split by the Protestant Revolt. The large success of Luther is easily explained by the new life which now permeated western Europe. The world was rapidly becoming modern, while the



FIG. 88. SHOWING THE RESULTS OF THE PROTESTANT REVOLTS

Church, with a perversity almost unexplainable, insisted upon remaining mediæval and tried to force others to remain mediæval with it. Adams expresses the situation well when he says: [1]

A revolution had been wrought in the intellectual world in the century between Huss and Luther. At the death of Huss the world had only just begun the study of Greek. Since that date, the great body of classical literature had been recovered, and the sciences of philology and historical criticism thoroughly established. As a result Luther had at his command a well-developed method . . . impossible to any earlier reformer. . . . The world also had become familiar with independent investigation, and with the proclamation of new views and the upsetting of old ones. By no means the least of the great services of Erasmus to civilization had been to hold up before all the world so *conspicuous an* example of the scholar following, as his inalienable

[1] *Adams, G. B., Civilization during the Middle Ages*, p. 433.

right, the truth as he found it and wherever it appeared to lead him, and honest in his public utterances as to the results of his studies. . . . His was the crowning work of a century which had produced in the general public a greatly changed attitude of mind toward intellectual independence since the days of Huss. The printing press was of itself almost enough to account for Luther's success as compared with his predecessors. Wycliffe made almost as direct and vigorous an appeal to the public at large, and with "an amazing industry he issued tract after tract in the tongue of the people," but Luther had the advantage in the rapid multiplication of copies and in their cheapness, and he covered Europe with the issues of his press. . . . Luther spoke to a very different public from that which Wycliffe or Huss had addressed, — a public European in extent, and one not merely familiar with the assertion of new ideas, but tolerant, in a certain way, of the innovator, and expectant of great things in the future.

A revolution it undoubtedly was, but a revolution in thinking much more than a political revolution. It was but a further manifestation of the inquiring and questioning tendency awakened by the Revival of Learning. It might in a sense be dated from Wycliffe and Huss, as well as from Erasmus and Luther. Luther did not create the Reformation. He rather popularized the work of preceding protesters, giving the impress of his powerful personality to the movement, and directing and moulding its form.

Revolts in other lands. The outbreak in Germany soon spread to other lands. Lutheranism made rapid headway in Denmark, where the German grievances against Italian rule were equally familiar, and in 1537 the Danish Diet severed all connection with Rome and established Lutheranism as the religion of the country. Norway, being then a part of Denmark, was carried for Lutheranism also. In Sweden the Church was shorn of some of its powers and property in 1527, and in 1592 Lutheranism was definitely adopted as the religion for the nation. This included Finland, then a part of Sweden. An independent reform movement, closely akin to Lutheranism in its aims, made considerable headway in German Switzerland contemporaneously with the reform work of Luther in Germany. This was under the leadership of a popular humanist preacher in Zurich by the name of Huldreich *Zwingli.* *In* 1519 he began a series of sermons on



FIG. 89. HULDREICH ZWINGLI (1487–1531)

real religion, as he had learned it from a study of the New Testament writings. Zwingli, being supported by the people, made many changes in church practices and worship, eventually even abolishing the mass. Many other towns took up this reform movement, and civil war was the result. Zwingli was killed in battle between Swiss partisans of the old régime and reformers, in 1531, but his work though checked persisted, and German Switzerland became mixed Catholic and Protestant.[1]

In England the struggle came nominally over the divorce (1533) of Henry VIII from Catherine of Aragon, though the independence of the English Church had been asserted from time to time for two centuries, and a free National Church had for long been a growing ideal with English statesmen. In 1534 Parliament passed the Act of Supremacy (**R. 153**) which severed England from Rome. By it the King was made head of the English National Church. The change was in no sense a profound one, such as had taken place in Lutheran Germany. The priests who took the new oath of allegiance to the King instead of the Pope as the head of the Church, as most of them did, continued in the churches, the service was changed to English, some reforms were instituted, but the people did not experience any great change in religious feeling or ideas. This new National Church became known as the English or Anglican Church.

So far as the early history of America is concerned, the most important reform movement was neither Lutheranism nor Anglicanism, but Calvinism. In 1537 John Calvin, a French Protestant who had fled to Switzerland,[2] was invited to submit a plan for the educational and religious reorganization of the city of Geneva, and in 1541 he was entrusted with the task of organizing there a little religious City-Republic. For this he established a combined church and city government, in which religious affairs and the civil government were as closely connected as they had

[1] A good illustration of the way parts of Germany and German Switzerland were divided by religious differences is to be found in the Canton of Appenzell, in northeastern Switzerland. As each small governmental division had to follow the religion of the ruling prince in Germany, so in Switzerland the cantons divided on religious lines. To compromise matters in Appenzell the canton was divided into two half cantons, following the religious wars of 1597 — Inner Rhoden, of sixty-three square miles, exclusively Roman Catholic, and Outer Rhoden, of ninety-six square miles, entirely under the Swiss Reformed Church.

[2] Calvinism is also a product of the northern humanism, Calvin's difficulties with the Church arising out of his study of the Greek texts. Calvin had received an excellent theological and legal education, and used the knowledge and training derived from both to help him formulate a comprehensive system of belief.

ever been in any Catholic country. During the twenty-three years that Calvin dominated Geneva it became the Rome of Protestantism. Calvin's *The Institutes of Christianity*, published in Latin in 1536, and in French in 1541, was the first orderly presentation of the principles of Christian faith from the Protestant standpoint,[1] while his French *Catechism* (1537) was extensively used [2] in Calvinistic lands as a basis for elementary religious instruction.



FIG. 90. JOHN CALVIN (1509–1564)
(Drawn from a contemporary painting)

From Geneva a reformed Calvinistic religion spread over northern France,[3] where its followers became known as *Huguenots;* to Scotland (1560), where they were known as *Scotch Presbyterians;* to the Netherlands (1572), where originated the Dutch Reformed Church; and to portions of central England, where those who embraced it became known as *Puritans*. Through the Puritans who settled New England, and later through the Huguenots in the Carolinas, the Scotch Presbyterians in the central colonies, and the Dutch in New York, Calvinism was carried to America, was for long the dominant religious belief, and profoundly colored all early American education. Lutheranism also came in through the Swedes along the Delaware and the Germans in Pennsylvania, while the Anglican Church, known in America as the *Episcopalian*, came in through the landed aristocracy in Virginia and the later settlers in New York. The early settlement of America was thus a Protestant

[1] Like the famous *Sentences* of Peter Lombard (p. 171), it formed a splendid textbook of the new faith. Calvin based his work on the infallibility of the Bible, as against that of the Church and Pope, and presented, in a remarkably clear and logical manner, the principles of Calvinistic doctrine. Before 1630, as many as seventy-four full editions and fourteen partial editions of the *Institutes* had been printed, and in nine different languages.

[2] This went through seventy-seven editions (fourteen in English) before 1630, and in nearly all the languages of Europe, and was one of four Catechisms, one of which was required of all Oxford undergraduates in 1578. It was adopted by the Scotch, Huguenot, French-Swiss, and Walloon (Dutch) churches, and was widely used in Holland, England, and America. (See "Calvin and Calvinism," in Monroe's *Cyclopedia of Education*, vol. I.)

[3] By 1560 the Calvinists had two thousand houses for religious worship in France, and demanded religious freedom. In 1562 the persecutions began in earnest, and for the next thirty-six years religious warfare ruled in France. In 1598 the Edict of Nantes established religious freedom, though this was revoked in 1685.

settlement, while the migration to America of large numbers of peoples from Catholic lands is a relatively recent movement.

Religious freedom and religious warfare. Of course the revolt against the authority of the Church, once inaugurated, could not be stopped. The same right to freedom in religious belief which Luther claimed for himself and his followers had of course to be extended to others. This the Protestants were not much more willing to grant than had been the Catholics before them. The world was not as yet ready for such rapid advances, and religious toleration,[1] though established in principle by the revolt, was an idea to which the world has required a long time to become accustomed. It took two centuries of intermittent religious warfare, during which Catholic and Protestant waged war on one another, plundered and pillaged lands, and murdered one another for the salvation of their respective souls, before the people of western Europe were willing to stop fighting and begin to recognize for others that which they were fighting for for themselves. When religious tolerance finally became established by law, civilization had made a tremendous advance.

The religious wars of the seventeenth and eighteenth centuries were waged with greatest intensity in Spain, France, and the German States, though no land wholly escaped. The result of this religious strife was to check the progress of the higher civilization of the people for nearly three centuries, and to delay greatly the coming of the great blessing of freedom in matters of religious belief, while the poverty and misery resulting from the devastation of these religious wars left neither the energy for nor the interest in educational or political progress.

The struggle to suppress Lutheranism in Germany was postponed for twenty-five years — due to outside pressure, chiefly that of the Turks in southeastern Europe — from the time that the Diet of Worms decided against Luther (1521). Finally, in 1546, the German-Spanish Emperor Charles V felt at last free to proceed against the Lutheran heresy, and from the breaking-out in that year of the struggle between Charles and the German

[1] Even the celebrated Peace of Augsburg (1555) which left to each German prince and each town and knight the liberty to choose between the beliefs of the Roman Church and the Lutheran, provided only for religious freedom for the rulers, and only one alternative. Calvinists, for example, hated equally by Catholic and *Lutheran,* were not included. So deeply was the idea of Church and State as inseparable *embedded in the* minds of men that no provision was made for the religious *freedom of subjects.* This was a much later evolution, coming first in America.

princes who sided with Luther, to the Peace of Westphalia, in 1648, represents a century of almost continual religious warfare in the German States. The worst of the period was the last thirty years, when religious ferocity and hatred reached its climax in the period known as the *Thirty Years' War* (1618–48). Though fought on German soil, France, Spain, and Sweden were deeply involved in the struggle. It left Germany a ruin. From the most prosperous State in Europe, in 1550, Germany was so reduced that it was not until the second third of the nineteenth century that central and southern Germany had fully recovered. More than half the population and two thirds of the movable property were swept away. The people were so reduced by starvation that cannibalism was openly practiced. But one tenth of the inhabitants of the Duchy of Würtemberg were left alive. Land tilled for centuries became a wilderness, thousands of towns were destroyed, whole trades were swept away, and the generation which survived the war came to manhood without knowing education, religion, law and order, or organized industry. Not until the end of the eighteenth century was Germany again able to make any significant contribution to education or civilization, and not until the middle of the nineteenth century did parts of Germany come to have as many people or cattle as before this devastating religious war broke out.

From 1560 to 1629 in France, also, a period of carnage and devastation prevailed, due to an attempt to exterminate the Calvinistic Huguenots. In the massacre of Saint Bartholomew's eve, in 1572, ten thousand Protestants are said to have perished in Paris alone, and forty-five thousand additional outside the city. Though the Edict of Nantes (1598) had granted religious toleration, this never was fully accomplished, and in 1685 the Edict was revoked. The Huguenots were now given fifteen days to become Catholics or leave France. The demands were enforced with great severity, and the sect, which embraced one tenth of the population of France, was stamped out and France became once more a Catholic country. In a short time four *hundred thousand thrifty* and highly intelligent Huguenots had



FIG. 91. A FRENCH PROTESTANT (c. 1600)
A restoration, Musée d'Artillerie, Paris

left France for other lands. In Southern German lands, Holland, England, and America many found a new home.

Changed attitude toward the old problems. The Peace of Westphalia (1648), which ended the bloody Thirty Years' War, itself the culmination of a century of bitter and vindictive religious strife, has often been regarded as both an end and a beginning. Though the persecution of minorities for a time continued, especially in France, this treaty marked the end of the attempt of the Church and the Catholic States to stamp out Protestantism on the continent of Europe. The religious independence of the Protestant States was now acknowledged, and the beginnings of religious freedom were established by treaty. This new freedom of conscience, once definitely begun for the ruling princes, was certain in time to be extended further. Ultimately the day must come, though it might be centuries away, when individual as well as national freedom in religious matters must be granted as a right, and one of the greatest blessings of mankind finally be firmly established by law.[1]

The end of the period of bitter religious warfare, too, was followed by a reaction against religious intolerance which contained within itself the germs of much future liberty and human progress. Paulsen has well expressed the change, in the following words: [2]

> The long and terrible wars to which the ecclesiastical schism had everywhere given rise — the wars of the Huguenots in France, the Thirty Years War, and the Civil War in England — had, in the end, created a feeling of indifference toward religious and theological problems. Did it really pay, people asked themselves, to kill each other and devastate each other's countries for the sake of such questions? Could these problems ever be decided at all? If not, was it not much more reasonable to let everyone believe what he could, and, instead of wasting breath and arguments, convincing to nobody, on transubstantiation, predestination, and real presence, to cultivate sciences which really placed lasting and verifiable truths within the reach of the understanding, such as mathematics and natural philosophy, geography and astronomy? Here were sciences which offered knowledge to the mind that could be turned to account in this earthly life, whereas those transcendental speculations were of no use at all. . . . Toward the end of the seventeenth century this spirit of indifference and scepticism toward theology, and sometimes even toward religion in general

[1] In the proposals for the League of Nations Covenant, made at the conclusion of the World War, in 1919, religious freedom for all persons in any State in the League was finally decided to be a necessary principle for any world league.

[2] *Paulsen, Fr., German Education, Past and Present*, pp. 96–97.

and the future world, formed a most important factor in the changing intellectual attitude of the times.[1]

Physically exhausted, and recognizing at last the futility of fire and sword as means for stamping out opposing religious convictions, but still thoroughly convinced as to the correctness of their respective points of view, both sides now settled down to another century and more of religious hatred, suspicion, and intolerance, and to a close supervision of both preaching and teaching as safeguards to orthodoxy. During the century following the Peace of Westphalia greater reliance than ever before was placed on the school as a means for protecting the faith, and the pulpit and the school now took the place of the sword and the torch as converting and holding agents.

Religious reform. The effect of the Protestant Revolts on the Church was good. For the first time in history Catholic churchmen learned that they could not rely on the general acceptance of any teachings they promulgated, or any practices they saw fit to approve. The spirit of inquiry which had been aroused by the methods of the humanists would in the future force them to explain and to defend. If they were to make headway against this great rebellion they must reform abuses, purify church practices, and see that monks and clergy led upright Christian lives. Unless the mass of the people could be made loyal to the Church by reverence for it, further revolts and the ultimate break-up of the institution were in prospect. The Council of Trent (1545–63) at last undertook the reform which should have come at least a century before. Better men were selected for the church offices, and bishops and clergy were ordered to reside in their proper places and to preach regularly. New religious orders arose, whose purpose was to prepare priests better for the service of the Church and for ministry to the needs of the people. Irritating practices were abandoned. The laws and doctrines of the Church were restated, in new and better form. Moral reforms were instituted. In most particulars the reforms forced by the work of Luther were thorough and complete, and since the middle of the sixteenth century the Catholic Church, in morals and government, has been a reformed Church. Above all, attention was turned to education rather than force as a means of winning and holding territory. A

[1] The terms *atheist* and *atheism* now arose, as the modern substitutes for excommunication and imprisonment, and during the next two centuries these were applied, by the churchmen *of the time, to* almost every prominent philosopher and scientist *and independent thinker.*

rigid quarantine was, however, established in Catholic lands against the further spread of heretical text books and literature. Especially was the reading of the Bible, which had been the cause of all the trouble, for a time rigidly prohibited.[1]

Such, in brief, are the historical facts connected with the various revolts against authority which split the Roman Catholic Church in the sixteenth century. These have been stated, as briefly and as impartially as possible, because so much of future educational history arose out of the conditions resulting from these revolts. The early educational history of America is hardly understandable without some knowledge of the religious forces awakened by the work of the Protestants. To the educational significance and consequences of these revolts we next turn.

QUESTIONS FOR DISCUSSION

1. How do you explain the difference in the effect, on the scholars of the time, of the Revival of Learning in Italy and in northern lands?
2. How do you explain the serious church opposition to the different attempts of northern scholars to try to turn the Church back to the simpler religious ideals and practices of early Christianity?
3. Explain how opposition to the practices of the Church could be organized into a political force.
4. Explain the analogy of a heretic in the fifteenth century and an anarchist of to-day.
5. Assuming that the Church had encouraged progressive evolution as a policy, and thus warded off revolution and disruption, in what ways might history have been different?
6. How can the bitter opposition to the reading and study of the Bible be explained?
7. Show the analogy between the freedom of thinking demanded by Luther, and that obtained three centuries earlier by the scholars in the rising universities. Why were the universities not opposed?
8. Enumerate the changes which had taken place in western Europe between the days of Wycliffe and Huss and the time of Luther, which enabled him to succeed where they had failed.
9. Explain in what ways the Protestant Revolt was essentially a revolution in thinking, and that, once started, certain other consequences must inevitably follow in time.
10. Was it perfectly natural that the reformers should refuse to their followers the same right to revolt, and separate off into smaller and still different sects, which they had contended for for themselves? Why?

[1] Very severe measures were enacted to prevent the spread of the contagion of heresy. All Protestant literature was forbidden circulation in Catholic lands. The printing-press, as a disseminator of heresy, was placed under strict license. Certain books were ordered burned. Perhaps the most extreme and ruthless measure was the prohibition, under penalty of death, of the reading of the Bible. That this harsh act was carried out the record of martyrs shows. As one example may be mentioned the sister of the Flemish artist Matsys and her husband, he being decapitated and she buried alive in the square fronting the cathedral at Louvain, in 1543, for having been caught reading the sacred Book.

11. On what basis could Catholic and Protestant wage war on one another to try to enforce their own particular belief?
12. Compare the individualism of the Greek Sophists with that of the Protestant reformers. Did Greece attempt to deal with them in the same way?

SELECTED READINGS

In the accompanying *Book of Readings* the following selections are reproduced:

147. Wycliffe: On the Enemies of Christ.
148. Wycliffites: Attack the Pope and the Practice of Indulgences.
149. Council of Constance: List of Church Abuses demanding Reform.
150. Geiler: A German Priest's View as to Coming Reform.
151. Luther: Illustrations from his Ninety-Five Theses.
152. Saint Thomas Aquinas: On the Treatment of Heresy.
153. Henry VIII: The English Act of Supremacy.

QUESTIONS ON THE READINGS

1. Was Wycliffe's attack (**147**) as direct and fierce as Luther's (**151**)?
2. Explain the difference in the results attained by the two attacks?
3. Was the challenge of Wycliffe's followers on indulgences (**148**) any less direct than that of Luther (**151**)?
4. Does the list of items drawn up by the Church Council of Constance (**149**) indicate a general recognition of the need for extensive Church reform?
5. Try to state the possible change in the progress of human history and civilization, had the demands of the Council of Constance (**149**) been carried out in good faith.
6. Considering the nature of heresy at the time, does the extract from Thomas Aquinas (**152**) indicate a narrow or a liberal attitude?

SUPPLEMENTARY REFERENCES

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CHAPTER XIII

EDUCATIONAL RESULTS OF THE PROTESTANT REVOLTS

I. AMONG LUTHERANS AND ANGLICANS

Ultimate consequences of the break with authority. That the Protestant Revolts in the different lands produced large immediate and permanent changes in the character of the education provided in the revolting States is no longer accepted as being the case. In every phase of educational history growth has proceeded by evolution rather than by revolution, and this applies to the Protestant Revolts as well as to other revolutions. Many changes naturally resulted at once, some of which were good and some of which were not, while others which were enthusiastically attempted failed of results because they involved too great advances for the time. Much, too, of the progress that was inaugurated was lost in the more than a century of religious strife which followed, and the additional century and more of suspicion, hatred, religious formalism, and strict religious conformity which followed the period of religious strife. The educational significance of the reformation movement, though, lies in the far-reaching nature of its larger results and ultimate consequences rather than in its immediate accomplishments, and because of this the importance of the immediate changes effected have been overestimated by Protestants and underestimated by Catholics.

The dominant idea underlying Luther's break with authority, and for that matter the revolts of Wycliffe, Huss, Zwingli, and Calvin as well, was that of substituting the authority of the Bible in religious matters for the authority of the Church; of substituting individual judgment in the interpretation of the Scriptures and in formulating decisions as to Christian duty for the collective judgment of the Church; and of substituting individual responsibility for salvation, in Luther's conception of justification through personal faith and prayer, for the collective responsibility for salvation of the Church.[1] Whether one believes that the

[1] Dr. Philip Schaff, the Church historian, says: "Schleiermacher reduced the whole difference between Romanism and Protestantism to the formula, 'Romanism makes the relation of the individual to Christ depend on his relation to the Church: Protestantism, *vice versa*, makes the relation of the individual to the Church depend on his relation to Christ.'" (Quoted by G. B. Adams, from a pamphlet, *Luther Symposiac*, Union Seminary, 1883.)

Protestant position was sound or not depends almost entirely upon one's religious training and beliefs, and need not concern us here, as it makes no difference with the course of history. We can believe either way, and the course that history took remains the same. The educational consequences of the position taken by the Protestants, though, are important.

Under the older theory of collective judgment and collective responsibility for salvation — that is, the judgment of the Church rather than that of individuals — it was not important that more than a few be educated. Under the new theory of individual judgment and individual responsibility promulgated by the Protestants it became very important, in theory at least, that every one should be able to read the word of God, participate intelligently in the church services, and shape his life as he understood was in accordance with the commandments of the Heavenly Father. This undoubtedly called for the education of all. Still more, from individual participation in the services of the Church, with freedom of judgment and personal responsibility in religious matters, to individual participation in and responsibility for the conduct of government was not a long step, and the rise of democratic governments and the provision of universal education were the natural and ultimate corollaries, though not immediately attained, of the Protestant position regarding the interpretation of the Scriptures and the place and authority of the Church. This was soon seen and acted upon. The great struggle of the sixteenth and seventeenth centuries, in consequence, became one for religious freedom and toleration; the great struggle of the eighteenth and nineteenth centuries has been for political freedom and political rights; to supply universal education has been left to the nineteenth and the twentieth centuries.

Schools and learning before the sixteenth century. After the rise of the universities, as we have seen, many Latin secondary schools were founded in western Europe, and a more extensive development of the cathedral and other larger church schools took place. Rashdall (**R. 154**) thinks that by 1400 the opportunity to attend a Latin grammar school was rather common, an opinion in which Leach and Nohle concur. After the humanistic learning had spread to northern lands these opportunities were increased and improved. In England, for example, some two hundred and fifty Latin grammar schools are known to have been in existence *by 1500. In* Germany, as we have seen (chapter xi),

many such schools were founded before the time of Luther. These offered a form of advanced education, in the language of the educated classes of the time, for those intending to go to the universities to prepare for service in either Church or State, and for teaching. The Church had also for long maintained or exercised control over a number of types of more elementary schools — parish, song, chantry, hospital (chapter VII) — the chief purpose of which was to prepare for certain phases of the church service, or to enter the secondary schools. These schools, too, were taught partly or wholly in Latin. In consequence, while Latin schools came to be rather widely diffused, schools in the vernacular hardly existed outside of a few of the larger commercial cities of the north. Even the burgh and guild schools (p. 205), established in the fourteenth and fifteenth centuries, were essentially Latin schools.

In the commercial cities of the North, however, though often only after quite a struggle with the local church authorities, which throughout the Middle Ages had maintained a monopoly of all instruction as a protection to orthodoxy, different types of elementary vernacular schools had been developed to meet local commercial needs, such as writing-schools to train writers,[1] and reckoning-schools to train young men to handle accounts.[2] Reading, manners, and religion were also taught in these schools. Other city schools, largely Latin in type, but containing some vernacular instruction to meet local business needs not met by the cathedral or parish schools of the city, were also developed. Up to the time of the Protestant Revolts, however, there was almost no instruction in the vernacular outside of the commercial cities, nor was there any particular demand for such instruction

[1] The importance of writing before the days of printing can readily be appreciated. Just as the monk was carefully trained to copy manuscript, so the clerk for a city or a business house needed to be carefully trained to read and write. Writing formed a distinct profession, there being the "city writer" (city clerk, we say), Latin and vernacular secretaries, traveling writers, writing teachers, etc. Writing masters sometimes taught reading also, but usually not. In some French cities the guild of writing masters was granted an official monopoly of the privilege of teaching writing in the city.

[2] Reckoning schools were to meet direct commercial needs in the cities, and were seldom found outside of commercial towns. The arithmetic taught in the Latin schools as a part of the Seven Liberal Arts was largely theoretical; the arithmetic in the reckoning schools was practical. The work of the professional reckoner in time developed similarly to that of the professional writer, and often the two were combined in one person. When employed by a city he was known as the city clerk. In 1482 the first reckoning book to be published in Germany appeared, filled with *merchant's rules* and applied problems in denominate numbers and exchange. See *an interesting monograph* by Jackson, L. L., *Sixteenth Century Arithmetic* (Trs. *College Pubs., No. 8,* 1906).



MARTIN LUTHER (1483–1546)
Professor of Theology at Wittenberg



PHILIPP MELANCHTHON (1497–1560)
Professor of Greek at Wittenberg

PLATE 6. EDUCATIONAL LEADERS IN PROTESTANT GERMANY
(From a painting dated 1543, by Lucas Cranach, a German contemporary of both men, and now in the Uffizi Gallery, at Florence)



elsewhere. If one wished to be a scholar, a statesman, a diplomat, a teacher, a churchman, or to join a religious brotherhood, he needed to study the learned language of the time, — Latin.



GERMAN
(From a woodcut, printed at Nuremberg, 1505)



FRENCH
(After a drawing by Soquand, 1528)

FIG. 92. TWO EARLY VERNACULAR SCHOOLS

With this he could be at home with people of his kind anywhere in western Europe. The vernacular he could leave to tradesmen, craftsmen, soldiers, laborers, and the servant classes.

These people, on the other hand, had practically no need for a written language, aside from a very small amount for business needs. Even here the sign of the cross would do. There were but few books written in the vernacular tongues, and these had to be copied by hand and, in consequence, were scarce and expensive. There were no newspapers (first newspaper, Venice, 1563) or magazines. Spectacles for reading were not known until the end of the thirteenth century, and were not common for two centuries after that. There was little knowledge that could not pass from mouth to mouth. Such little vernacular literature as did exist was transmitted orally, and no great issue which appealed to the imagination of the masses had as yet come to the front to create any strong desire for the ability to read. As a result, the education of the masses was in hand labor, the trades, and religion, and *not in books. and the need* for book education was scarcely felt.

A new demand for vernacular schools. The invention of printing and the Protestant Revolts were in a sense two revolutionary forces, which in combination soon produced vast and far-reaching changes. The discovery of the process of making paper and the invention of the printing-press changed the whole situation as to books. These could now be reproduced rapidly and in large numbers, and could be sold at but a small fraction of their former cost. The printing of the Bible in the common tongue did far more to stimulate a desire to be able to read than did the Revival of Learning (**Rs. 155, 170**). Then came the religious discussions of the Reformation period, which stirred intellectually the masses of the people in northern lands as nothing before in history had ever done. In an effort to reach the people the reformers originated small and cheap pamphlets, written in the vernacular, and these, sold for a penny or two, were peddled in the market-places and from house to house. While there had been imperfect translations of the Bible in German before Luther's, his translation (New Testament, 1522) was direct from the original Greek and so carefully done that it virtually fixed the character of the German language.[1] Calvin's *Institutes of Christianity* (French edition, 1541) in a similar manner fixed the character of the French language,[2] and Tyndale's translation of the New Testament (1526) was into such simple and homely language [3] that it fixed the character of the English tongue, and was made the basis for the later Authorized translation.

The leaders of the Protestant Revolts, too, in asserting that each person should be able to read and study the Scriptures as a

[1] Luther tried to make a translation so simple that even the unlearned might profit by listening to its reading. To insure that his translation should be in a language that would be perfectly clear and natural to the common people, he went about asking questions of laborers, children, and mothers to secure good colloquial expressions. It sometimes took him weeks to secure the right word, but so satisfactory was the result that it fixed the standard for modern German, and still stands as the most conspicuous landmark in the history of the German language.

[2] The French version of this great original work represents the first use of French as a language for an argumentative treatise, and, as Calvin's work was more widely discussed than any other Protestant theological treatise, it did much to fix the character of this national language.

[3] "Tyndale's translation is not only the first which goes back to the original tongues, but it is so noble a translation in its mingled tenderness and majesty, its Saxon simplicity, and its smooth, beautiful diction that it has been but little improved on since. Every succeeding version is little more than a revision of Tyndale's." (J. Paterson Smyth, *How We Got Our Bible.*)

The following extract from Matthew is illustrative: "O oure father which art in *heven, halewed* be thy name. Let thy kingdom come. Thy wyll be fulfilled, as well *in erth, as hit ys in heven.* Geve vs this daye oure dayly breade. And forgeve vs *oure treaspases, even* as we forgeve them whych treaspas vs. Lede vs nott in to *temptacion, but delyvre* vs from yvell. Amen."

means to personal salvation, created an entirely new demand, in Protestant lands, for elementary schools in the vernacular. Heretofore the demand had been for schools only for those who expected to become scholars or leaders in Church or State, while the masses of the people had little or no interest in learning. Now a new class became desirous of learning to read, not Latin, but the language which they had already learned to speak. Wycliffe,

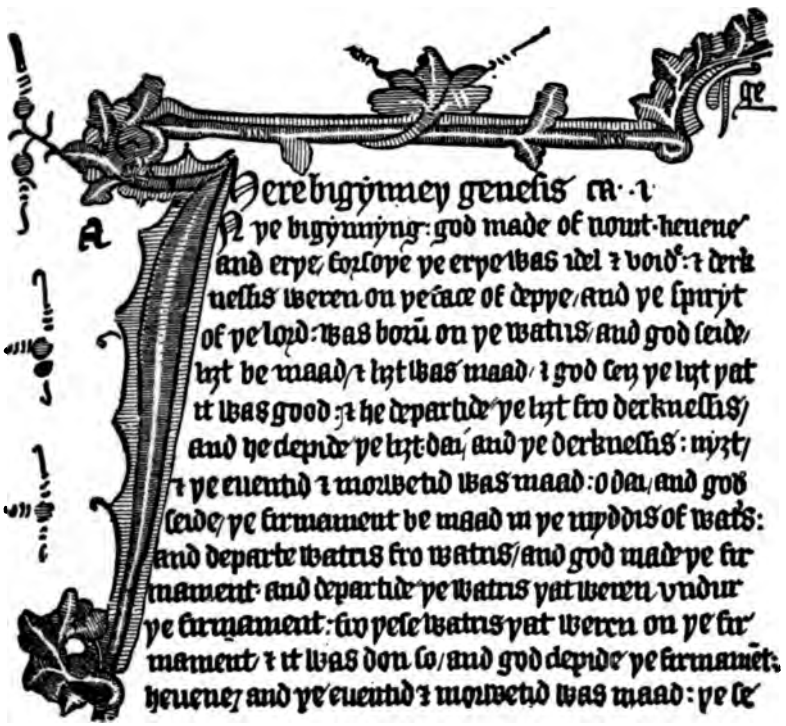

Here bigynneþ genesis ca·1
In ye bigynnyng: god made of nowt·heuene
and erþe; forsope ye erþe was idel & void: & derk
nesse were on ye face of depþe: and ye spirit
of ye lord was born on ye watris: and god seide:
liȝt be maad: & liȝt was maad: & god seiȝ ye liȝt þat
it was good: & he departide ye liȝt fro derknesse:
and he clepide ye liȝt day: and ye derknesse: niȝt:
& ye euentid & morwetid was maad: o day: and god
seide: ye firmament be maad in ye myddis of watis:
and departe watris fro watris: and god made ye firmament: and departide ye watris þat weren vndir
ye firmament: fro þese watris þat weren on ye firmament: & it was don so: and god clepide ye firmament:
heuene: and ye euentid & morwetid was maad: ye se

FIG. 93. THE FIRST PAGE OF WYCLIFFE'S BIBLE
Translated between 1382 and 1384. Facsimile of the first verses of Genesis

Huss, Zwingli, Luther, Calvin, and Knox alike insisted on the importance of the study of the Bible as a primary necessity in the religious life. In an effort to bring the Bible within reach of the people Wycliffe's followers had attempted the laborious and impossible task of multiplying by hand (p. 290) copies of his translation. Zwingli had written a pamphlet on *The Manner of Instruction and Bringing up Boys in a Christian Way* (1524), in which he urged the importance of religious education. Luther, besides translating the Bible, had prepared two general Catechisms, one

for adults and one for children, had written hymns,[1] and issued numerous letters and sermons in behalf of religious education. All these were printed in the vernacular and scattered broadcast. Luther thought that "every human being, by the time he has reached his tenth year, should be familiar with the Holy Gospels, in which the very core and marrow of his life is bound." In his sermons and addresses he urged a study of the Bible and the duty of sending children to school. Calvin's Catechism similarly was extensively used in Protestant lands.

1. *Lutheran School Organization*

Educational ideas of Luther. Luther enunciated the most progressive ideas on education of all the German Protestant reformers. In his *Letter to the Mayors and Aldermen of all the Cities of Germany in behalf of Christian Schools* (1524) (**R. 156**), and in his *Sermon on the Duty of Sending Children to School* (1530), we find these set forth. That his ideas could be but partially carried out is not surprising. There were but few among his followers who could understand such progressive proposals, they were entirely too advanced for the time, there was no body of vernacular teachers [2] or means to prepare them, the importance of such training was not understood, and the religious wars which followed made such educational advantages impossible, for a long time to come. The sad condition of the schools, which he said were "deteriorating throughout Germany," awakened his deep regret, and he begged of those in authority "not to think of the subject lightly, for the instruction of youth is a matter in which Christ and all the world are concerned." All towns had to spend money for roads, defense, bridges, and the like, and why not some for schools? This they now could easily afford, "since Divine Grace has released them from the exaction and robbery of the Roman Church." Parents continually neglected their educational duty, yet there must be civil government. "Were there neither soul, heaven, nor hell," he declared, "it would still be necessary to have schools for the sake of affairs here below. . . . The world

[1] The most famous of Luther's German hymns, and one expressive of the Protestant spirit, is the one beginning:

"Ein feste Burg ist unser Gott, "A mighty fortress is our God,
Ein gute Wehr und Waffen." A bulwark never failing."

This hymn has often been called "The Marseillaise of the Reformation."

[2] *The evolution, during the sixteenth and seventeenth centuries, of the German vernacular school-teacher out of the parish sexton is one of the interesting bits of our educational history.*

has need of educated men and women to the end that men may govern the country properly and women may properly bring up their children, care for their domestics, and direct the affairs of their households." "The welfare of the State depends upon the intelligence and virtue of its citizens," he said, "and it is therefore the duty of mayors and aldermen in all cities to see that Christian schools are founded and maintained" (**R. 156**).

The parents of children he held responsible for their Christian and civic education. This must be free, and equally open to all



FIG. 94. LUTHER GIVING INSTRUCTION
An ideal drawing, though representative of early Protestant popular instruction

— boys and girls, high and low, rich and poor. It was the inherent right of each child to be educated, and the State must not only see that the means are provided, but also require attendance at the schools (**R. 158**). At the basis of all education lay Christian education. The importance of the services of the teacher was beyond ordinary comprehension (**R. 157**). Teachers should be trained for their work, and clergymen should have had experience as teachers. A school system for German people should be a state system, divided into:

1. *Vernacular Primary Schools.* Schools for the common people, to be taught in the vernacular, to be open to both sexes, to include reading, writing, physical training, singing, and religion, and to give *practical instruction in a trade* or in household duties. Upon this

attendance should be compulsory. "It is my opinion," he said, "that we should send boys to school for one or two hours a day, and have them learn a trade at home the rest of the time. It is desirable that these two occupations march side by side."

2. *Latin Secondary Schools.* Upon these he placed great emphasis (R. 156) as preparatory schools by means of which a learned clergy was to be perpetuated for the instruction of the people. In these he would teach Latin, Greek, Hebrew, rhetoric, dialectic, history, science, mathematics, music, and gymnastics.

3. *The Universities.* For training for the higher service in Church and State.

The organizing work of Bugenhagen. Luther assisted in reorganizing the churches at Wittenberg (1523), Leipzig (1523), and Magdeburg (1524), in connection with all of which he provided for Lutheran-type schools.[1] Luther, though, was not essentially an organizer. The organizing genius of the Reformation, in central and southern Germany, was Luther's colleague, Philipp Melanchthon (1497–1560), Professor of Greek at the University of Wittenberg. In northern Germany it was Johannes Bugenhagen (1485–1558), another of Luther's colleagues at Wittenberg. More than any other Germans these two directed the necessary reorganization of religion and education in those parts of Germany which changed from Roman Catholicism to German Lutheranism. The churches, of course, had to be reorganized as Lutheran churches, and the schools connected with them refounded as Lutheran schools. For the reorganization of each of these a more or less detailed *Ordnung* had to be written out (Rs. 159, 160). In this change cathedral and other large church schools became Latin secondary schools, while the song, chantry, and other types of parish elemen-



FIG. 95. JOHANNES BUGENHAGEN (1485–1558)
Father of the Lutheran *Volksschule* in northern Germany

[1] *Magdeburg is typical,* where the Lutherans united all the parish schools under the supervision of one pastor.

tary schools were transformed into Lutheran vernacular parish schools.

Bugenhagen was sent to reorganize the churches of northern Germany. Being in close sympathy with Luther's ideas, he made good provision for Lutheran parish schools in connection with each of the churches he reorganized. At Brunswick (1528), Hamburg (1529) (**R. 159**), Lübeck (1530), for his native State of Pomerania (1534), for Schleswig-Holstein (1537), and elsewhere in northern Germany, he drew up church and school plans (*Kirchen und Schule-Ordnungen*) which formed models (**Rs. 159, 160**) for many northern German cities and towns. Besides providing for a Latin school for the city, he organized elementary vernacular schools in each parish, for both boys and girls, in which instruction in reading, writing, and religion was to be given in the German tongue. He has been called the father of the German *Volksschule*, though probably much of what he did was merely the redirection of existing schools. In 1537 he was called to Denmark, by the Danish King, to reorganize the University of Copenhagen and the Danish Church and schools as Lutheran institutions.

Efforts were also made to create Protestant schools in the Scandinavian countries. In Denmark writing-schools for both boys and girls were organized, and the sexton of each parish was ordered to gather the children together once a week for instruction in the Catechism. In Sweden little was done before 1686, when Charles XI ordained that the sacristan of each parish should instruct the children in reading, while the religious instruction should be conducted by the clergy, and carried on by means of sermons, the Catechism, and a yearly public examination. The ability to read and a knowledge of the Catechism was made necessary for communion. A Swedish law of this same time also ordered that, "No one should enter the married state without knowing the lesser Catechism of Luther by heart and having received the sacrament." This latter regulation drove the peasants to request the erection of children's schools in the parishes, to be supported by the State, though it was not for more than a century that this was generally brought about. The general result of this legislation was that the Scandinavian countries, then including Finland, early became literate nations.

The Reorganizing work of Melanchthon. Melanchthon, *unlike Bugenhagen, was* essentially a humanistic scholar, and his

interest lay chiefly in the Latin secondary schools. He prepared plans for schools in many cities and smaller States of central and southern Germany, among which were Luther's native town, Eisleben (1525), and for Nuremberg (1526; p. 271), Herzeberg (1538), Cologne (1543), and Wittenberg (1545) among cities; and Saxony (1528), Mecklenberg (1552), and the Palatinate (1556) among States. The schools he provided for Saxony may be described as typical of his work.

In 1527 he was asked by the Elector of Saxony to head a commission of three to travel over the kingdom and report on its needs as to schools. In his *Report, or Book of Visitation*, which was probably the first school survey report in history, he outlined in detail plans for school organization for the State (R. 161), of which the following is an abstract:

> Each school was to consist of three classes. In the first class there was to be taught the beginnings of reading and writing, in both the vernacular and in Latin, Latin grammar (Donatus), the Creed, the Lord's prayer, and the prayers and hymns of the church service. In the second class Latin became the language of instruction, and Latin grammar was thoroughly learned. Latin authors were read, and religious instruction was continued. In the third class more advanced work in reading Latin (Livy, Sallust, Vergil, Horace, and Cicero) was given, and rhetoric and dialectic were studied.

These were essentially humanistic schools with but a little preparatory work in the vernacular, and their purpose was to prepare those likely to become the future leaders of the State for entrance to the universities. How different was Melanchthon's conception as to the needs for education from the conceptions of Luther and Bugenhagen may easily be seen. Yet, so great were his services in organizing and advising, and so well did such schools meet the great demand of the time for educational leaders that he has, very properly, been called "the Preceptor of Germany." His work was copied by other leaders, and the result was the organization of a large number of humanistic *gymnasia* throughout northern Germany, in which the new learning and the Protestant faith were combined. Sturm's school at Strassburg (p. 272) was one of the more important and better organized of this type, many of which have had a continuous existence up to the present. By 1540 the process was begun of endowing such schools from the *proceeds of old* monasteries, confiscated by the State, and many *German gymnasia* of to-day trace their origin back to some old

monastic foundation, altered by state authority to meet modern needs and purposes.

Early German state school systems. Melanchthon's Saxony plan was put into partial operation as a Lutheran Church school system, but the first German State to organize a complete system of schools was Würtemberg (**R. 162**), in southwestern Germany, in 1559. This marks the real beginning of the German state school systems. Three classes of schools were provided for:

(1) Elementary schools, for both sexes, in which were to be taught reading, writing, reckoning, singing, and religion, all in the vernacular. These were to be provided in every village in the Duchy.

(2) Latin schools (*Particularschulen*), with five or six classes, in which the ability to read, write, and speak Latin, together with the elements of mathematics and Greek in the last year, were to be taught.

(3) The universities or colleges of the State, of which the University of Tübingen (f. 1476) and the higher school at Stuttgart were declared to be constituent parts.

Acting through the church authorities, these schools were to be under the supervision of the State.

The example of Würtemberg was followed by a number of the smaller German States. Ten years later Brunswick followed the same plan, and in 1580 Saxony revised its school organization after the state-system plan thus established. In 1619 the Duchy of Weimar added compulsory education in the vernacular for all children from six to twelve years of age. In 1642, the same date as the first Massachusetts school law (chapter XV), Duke Ernest the Pious of little Saxe-Gotha and Altenburg established the first school system of a modern type in German lands. An intelligent and ardent Protestant, he attempted to elevate his miserable peasants, after the ravages of the Thirty Years' War, by a wise economic administration and universal education. With the help of a disciple of the greatest educational thinker of the period, John Amos Comenius (chapter XVII), he worked out a School Code (*Schulmethode*, 1642) which was the pedagogic masterpiece of the seventeenth century (**R. 163**). In it he provided for compulsory school attendance, and regulated the details of method, grading, and courses of study. Teachers were paid salaries which for the time were large, pensions for their widows and children were provided, and textbooks were prepared and supplied free. So successful were his efforts that Gotha became one of the most *prosperous little* spots in Europe, and it was said

that "Duke Ernest's peasants were better educated than noblemen anywhere else."

By the middle of the seventeenth century most of the German States had followed the Würtemberg plan of organization. Even Duke Albrecht V of Bavaria, which was a Catholic State, ordered the establishment of "German schools" throughout his realm, with instruction in reading, writing, and the Catholic creed, the schools to be responsible through the Church to the State.

Protestant state school organization. We see here in German lands a new, and, for the future, a very important tendency. Throughout all the long Middle Ages the Church had absolutely controlled all education. From the suppression of the pagan schools, in 529 A.D., to the time of the Reformation there had been no one to dispute with the Church its complete monopoly of education. Even Charlemagne's attempt at the stimulation of educational activity had been clearly within the lines of church control. Until the beginnings of the modern States, following the Crusades, the Church had been the State as well, and for long humbled any ruler who dared dispute its power. In the later Middle Ages nobles and rising parliaments had at times sided with the king against the Church — warnings of a changing Europe that the Church should have heeded — but there had been no serious trouble with the rising nationalities before the sixteenth century. Now, in Protestant lands, all was changed. The authority of the Church was overthrown. By the Peace of Augsburg (1555) each German prince and town and knight were to be permitted to make choice between the Catholic and Lutheran faith, and all subjects were to accept the faith of their ruler or emigrate.

This established freedom of conscience for the rulers, but for no one else. It also gave them control of both religious and secular affairs, thus uniting in the person of the ruler, large or small, control of both Church and State. This was as much progress toward religious freedom as the world was then ready for, as Church and State had been united for so many centuries that a complete separation of the two was almost inconceivable. It was left for the United States (1787) to completely divorce Church and State, and to reduce the churches to the control of purely *spiritual* affairs.

The German rulers, however, were now free to develop schools

as they saw fit, and, through their headship of the Church in their principality or duchy or city, to control education therein. We have here the beginnings of the transfer of educational control from the Church to the State, the ultimate fruition of which came first in German lands, and which was to be the great work of the nineteenth century. It was through the kingly or ducal headship of the Church, and through it of the educational system of the kingdom or duchy, that the great educational development in Würtemberg, Saxony, and Gotha was brought about by their rulers, and it was through the ruling princes that the German universities were reformed [1] and the new Protestant universities established.[2] Even in Catholic States, as Bavaria, the German state-control idea took root early. Many of the important features of the modern German school systems are to be seen in their beginnings in these Lutheran state-church schools.

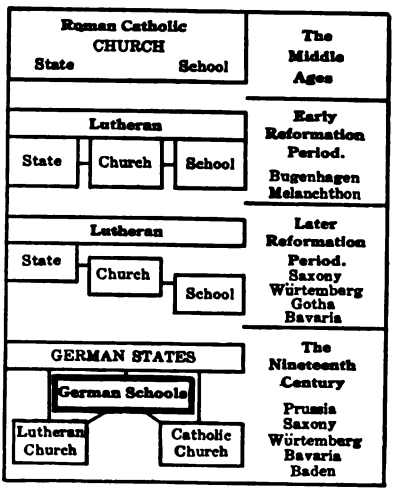


FIG. 96. EVOLUTION OF GERMAN STATE SCHOOL CONTROL

2. *Anglican foundations*

The Reformation and education in England. The Reformation in England took a very different direction from what it did in Germany, and its educational results in consequence were very different. In England the reform movement was much more political in character than in German lands. Henry VIII was no Protestant, in the sense that Luther or Calvin or Zwingli or Knox

[1] Wittenberg, founded in 1502 as a new-learning university, and in which Luther, Melanchthon, and Bugenhagen were professors, was the first of the universities to become Protestant. Gradually the other universities in Protestant Germany threw off their allegiance to the Pope, and took on that of the ruling prince.

[2] The first Protestant university to be founded was Marburg, in Hesse, in 1527. When this later went over to Calvinism, a new university was founded at Giessen, in 1607, by a migration of the Lutheran professors. Other Protestant universities founded were Königsberg (1544) Jena (1556), Helmstadt (1576), and the free-city universities of Altdorf (1573), Strassburg (1621), Rinteln (1621), Duisberg (1655) and Kiel (1665). The support of these came, to a considerable extent, from old monastic or *ecclesiastical foundations* which had been dissolved after the Reformation.

was. He distrusted their teachings, and was always anxious to explain objections to the old faith. The people of England as a body, too, had been much less antagonized by the exactions of the Roman Church and the immoral lives of the monks and Roman clergy; the new learning had awakened there somewhat less of a spirit of moral and religious reform; and the reformation movement of Luther, after a decade and a half, had roused no general interest. The change from the Roman Catholic faith to an independent English Church, when made, was in consequence much more nominal than had been the case in German lands. As a result the severance from Rome was largely carried out by the ruling classes, and the masses of the people were in no way deeply interested in it. The English National Church merely took over most of the functions formerly exercised by the Roman Church, in general the same priests remained in charge of the parish churches, and the church doctrines and church practices were not greatly altered by the change in allegiance. The changing of the service from Latin to English was perhaps the most important change. The English Church, in spirit and service, has in consequence retained the greatest resemblance to the Roman Catholic Church of any Protestant denomination. In particular, the Lutheran idea of personal responsibility for salvation, and hence the need of all being taught to read, made scarcely any impression in England.

By the time of Elizabeth (1558–1603) it had become a settled conviction with the English as a people that the provision of education was a matter for the Church, and was no business of the State, and this attitude continued until well into the nineteenth century. The English Church merely succeeded the Roman Church in the control of education, and now licensed the teachers (**R. 168**), took their oath of allegiance (**R. 167**), supervised prayers (**R. 169**) and the instruction, and became very strict as to conformity to the new faith (**Rs. 164–166**), while the schools, aside from the private tuition and endowed schools, continued to be maintained chiefly from religious sources, charitable funds, and tuition fees. Private tuition schools in time flourished, and the tutor in the home became the rule with families of means. The poorer people largely did without schooling, as they had done for centuries before. As a consequence, the educational results of the change in the headship of the Church relate almost entirely to grammar schools and to the universities, and not to elementary

education. The development of anything approaching a system of elementary schools for England was consequently left for the educational awakening of the latter half of the nineteenth century. When this finally came the development was due to political and economic, and not to religious causes.

The English Act of Supremacy (**R. 153**), which severed England from Rome, had been passed by parliament in 1534. In 1536 an English Bible was issued to the churches,[1] the services were ordered conducted in English, and in 1549 the English Prayer Book, Psalter, and Catechism were put into use. In 1538 the English Bible was ordered chained in the churches,[2] that the people might read it (**R. 170**), and the people were ordered instructed in English in the Creed, the Lord's Prayer, and the Ten Commandments. The change of the service to English was perhaps the largest educational gain the masses of the people obtained as the result of the Reformation in England.[3]



FIG. 97. A CHAINED BIBLE
(Redrawn from an old print showing a chained Bible in a church in York, England)

Suppression of the monasteries and the founding of grammar schools. Between 1536 and 1539 the most striking result of the Reformation in England took place, — the dissolution of the monasteries. Their doubtful reputation enabled Henry and Par-

[1] This was in response to a petition to the King, nearly two years before. The King finally granted the request, "though maintaining that he was not compelled by God's Word to set forth the Scriptures in English, yet 'of his own liberality and goodness was and is pleased that his said loving subjects should have and read the same in convenient places and times.'" (Procter and Frere, *History of the Book of Common Prayer*, p. 30.)

[2] "The injunctions directed that 'a Bible of the largest volume in English' be set up in some convenient place in every church, where it might be read, only without noise, or disturbance of any public service, and without any disputation, or exposition." (*Ibid.*, p. 30.)

[3] The right to read the Bible was later revoked, during the closing years of Henry VIII's reign (d. 1547), by an act of Parliament, in 1543, which provided that "no woman (unless she be a noble or gentle woman), no artificers, apprentices, journeymen, servingmen, under the degree of yeomen . . . husbandmen, or laborers" should read or use any part of the Bible under pain of fines and imprisonment.

liament to confiscate their property, and "the dead hand of monasticism was removed from a third of the lands of England." There were precedents for this in pre-Reformation times, the church authorities themselves having converted several monastic foundations into grammar schools. At one blow Parliament now suppressed the monasteries of all England, some eight thousand monks and nuns were driven out, many of the monasteries, nunneries, and abbey churches were destroyed, and the monastic lands were forfeited to the Crown. It was a ruthless proceeding, though in the long course of history beneficial to the nation. Much of the land was given to influential followers of the king in return for their support, and a large part of the proceeds from sales was spent on coast defenses and a navy, though more than was formerly thought to be the case was used in refounding grammar schools. A number of the monasteries were converted into collegiate churches, with schools attached. Some of the almshouses and hospitals confiscated at the same time were similarly used, and the cathedral churches in nine English cities were taken from the monks (**R. 171**), who had driven out the regular clergy during the tenth to the twelfth centuries, and were refounded as cathedral church schools. The cathedral church school at Canterbury, which Henry refounded in 1541 as a humanistic grammar school, with a song school attached, and for the government of which he made detailed provisions (**R. 172**), is typical of a school which had fallen into bad repute (**R. 171**), and was later refounded as a result of the confiscation of the monastic property. The College of Christ Church at Oxford, and Trinity College at Cambridge, were also richly endowed from the monastic proceeds.

In 1546 another Act of Parliament vested the title of all chantry foundations, some two hundred in number, in the Crown that they might be "altered, changed, and amended to convert them to good and godly uses as in the erecting of grammar schools," but so pressing became the royal need for money that, after their sale, the intended endowments were never made. As the song schools had been established originally to train a few boys "to help a priest sing mass," and as the service was now to be read rather than sung, the need for choristers largely disappeared. Being regarded as nurseries of superstition, they were abandoned without regret.

***Result of the* Reformation in England.** The result of the *change in religious* allegiance in England was a material decrease



PLATE 7. THE FREE SCHOOL AT HARROW

One of the "Great Public" Grammar Schools of England. Founded in 1571, in the reign of Elizabeth; building finished in 1593. The names of famous "old boys" are seen lettered on the wall at the back. Pupils are seen seated in "forms," reciting to the masters. (From a picture published by Ackermann. in his illustrated *History of the Colleges of Winchester, Eton, Westminster*, etc. London, 1816.)



in the number of places offering grammar-school advantages, though with a material improvement in the quality of the instruction provided, and a consequent decrease in the number of boys given free education in the refounded grammar schools. As for elementary education, the abolition of the song, chantry, and hospital schools took away most of the elementary schools which had once existed. The clerk of the parish usually replaced them by teaching a certain number of boys "to read English intelligently instead of Latin unintelligently," many new parish elementary schools were created, especially during the reign of Elizabeth, and in time the dame school, the charity school, the writing school, and apprenticeship training arose (chapter XVIII) and became regular English institutions. These types of schooling constituted almost all the elementary-school advantages provided in England until well into the eighteenth century.

The post-Reformation educational energy of England was given to the founding of grammar schools, and during the century and a half before the outbreak of the struggle with James II (1688) to put an end in England for all time to the late-mediæval theory of the divine right of kings, a total of 558 grammar schools were founded or refounded.[1]

The grammar schools thus founded were, one and all, grammar schools of the reformed humanistic type. What was to be taught in them was seldom mentioned in the foundation articles, as it was assumed that every one knew what a grammar school was, so well by this time had the humanistic type become established. They were one and all modeled after the instruction first provided in Saint Paul's School (p. 275) in London, and such modifications as had been sanctioned with time, and this continued to be the type of English secondary school instruction until well into the nineteenth century.

The dominating religious purpose. The religious conflicts following the reformation movement everywhere intensified religious prejudices and stimulated religious bigotry. This was soon

[1] These were, distributed by reigns, as follows:

Henry VIII	(1509–1547)	63 schools
Edward VI	(1547–1553)	50 "
Mary	(1553–1558)	19 "
Elizabeth	(1558–1603)	138 "
James I	(1603–1625)	
Charles I	(1625–1649)	142 "
Protectorate	(1649–1660)	
Charles II	(1660–1685)	
James II	(1685–1688)	146 "

reflected in the schools of all lands. In England, after the restoration under Catholic Mary (1553–58) and the final reëstablishment of the English Church under Elizabeth (1558), all school instruction became narrowly religious and English Protestant in type. By the middle of the seventeenth century the grammar schools had become nurseries of the faith; as well as very formal and disciplinary in character. In England, perhaps more than in any other Protestant country, Christianity came to be identified with a strict conformity to the teachings and practices of the Established Church, and to teach that particular faith became one of the particular missions of all types of schools. Bishops were instructed to hunt out schoolmasters who were unsound in the faith (**R. 164 a**), and teachers were deprived of their positions for nonconformity (**R. 164 b**). More effectively to handle the problem a series of laws were enacted, the result of which was to institute such an inquisitorial policy that the position of schoolmaster became almost intolerable. In 1580 a law (**R. 165**) imposed a fine of £10 on any one employing a schoolmaster of unsound faith, with disability and imprisonment for the schoolmaster so offending; in 1603 another law required a license from the bishop on the part of all schoolmasters as a condition precedent to teaching; in 1662 the obnoxious Act of Uniformity (**R. 166**) required every schoolmaster in any type of school, and all private tutors, to subscribe to a declaration that they would conform to the liturgy of the Church, as established by law, with fine and imprisonment for breaking the law; in 1665 the so-called "Five-Mile Act" forbade Dissenters to teach in any school, under penalty of a fine of £40; and in that same year bishops were instructed to see that

> the said schoolmasters, ushers, schoolmistresses, and instructors, or teachers of youth, publicly or privately, do themselves frequent the public prayers of the Church, and cause their scholars to do the same; and whether they appear well affected to the Government of his Majesty, and the doctrine and discipline of the Church of England.

This attitude also extended upward to the universities as well, where nonconformists were prohibited by law (1558) from receiving degrees, a condition not remedied until 1871 (**R. 305**). The great purpose of instruction came to be to support the authority and the rule of the Established Church, and the almost *complete purpose* of elementary instruction came to be to train *pupils to read* the Catechism, the Prayer Book, and the Bible.

This intense religious attitude in England was reflected in early colonial America, as we shall see in a following chapter.

The Poor-Law legislation, and its educational significance. After the thirteenth century, due in part to the rise of the wool industry in Flanders, England began to change from a farming to a sheep-raising country. Accompanying this decline in the importance of farming there had been a slow but gradual growth of trade and manufacturing in the cities, and to the cities the surplus of rural peasantry began to drift. The cost of living also increased rapidly after the fifteenth century. As a result there was a marked shifting of occupations, much unemployment, and a constantly increasing number of persons in need of poor-relief. In the time of Elizabeth (1558–1603) it has been estimated that one half the population of England did not have an income sufficient for sustenance, and great numbers of children were running about without proper food or care, and growing up in idleness and vice.

The situation, which had been growing worse for two centuries, culminated at the time of the Reformation when the religious houses, which had previously provided alms, were confiscated as a result of the reformation activities. The groundwork of the old system of religious charity was thus swept away, and the relation which had for so long existed between prayer and penance and almsgiving and charity was altered. The nation was thus forced to deal with the problem of poor-relief, and with the care of the children of the poor. In the place of the old system the people were forced, by circumstances, to develop a new conception of the State as a community of peoples bound together by community interest, good feeling, charity, and service.

As this new conception dawned on the English people, a series of laws were enacted which attempted to provide for the situation which had been created. These were progressive in character, and ranged over much of the sixteenth century. First the poor were restricted from begging, outside of certain specified limits. Next church collections and parish support for the poor were ordered (1553), and the people were to be urged to give. Then workhouses for the poor and their children, and materials with which to work, were ordered provided, and those persons of means who would not give freely were to be cited before the bishop first (R. 173), and the justices later, and if necessary forcibly assessed (1563). *The next step* was to permit the local authorities to

raise needed funds by strictly local taxation (1572). In 1601 the last step was taken, when the compulsory taxation of all persons of property was ordered to provide the necessary poor-relief, and the excessive burdens of one parish were to be shared by neighboring parishes. Thus, after a long period of slowly evolving legislation (**R. 173**), the English Poor-Law of 1601 (**R. 174**) finally gave expression to the following principles:

1. The compulsory care of the poor, as an obligation of the State.
2. The compulsory apprenticeship of the children of the poor, male and female, to learn a useful trade.
3. The obligation of the master to train his apprentices in a trade.
4. The obligation of the overseers of the poor to supply, where necessary, the opportunity and the materials for such training of the children of the poor.
5. The compulsory taxation of all persons of property to provide the necessary funds for such a purpose, and without reference to any benefits derived from the taxation.
6. The excessive burdens of any one parish to be pooled throughout the hundred or county.

In this compulsory apprenticeship of the children of the poor, with the obligation imposed that such children must be trained in a trade and in proper living, with general taxation of those of property to provide workhouses and materials for such a purpose, we have the germ, among English-speaking peoples, of the idea of the general taxation of all persons by the State to provide schools for the children of the State. The apprenticing of the children of the poor to labor and the requirement that they be taught the elements of religion soon became a fixed English practice (**R. 217**), and in the seventeenth century this idea was carried to the American colonies and firmly established there. It was on the foundations of the English Poor-Law of 1601, above stated, that the first Massachusetts law relating to the schooling of all children (1642) was framed (**R. 190**), but with the significant Calvinistic addition that:

7. "In euery towne ye chosen men" shall see that parents and masters not only train their children in learning and labor, but also "to read & understand the principles of religion & the capitall lawes of this country," with power to impose fines on such as refuse to render accounts concerning their children.

QUESTIONS FOR DISCUSSION

1. Why is progress that is substantial nearly always a product of slow rather than rapid evolution?
2. Show why the evolution of many Protestant sects was a natural consequence of the position assumed by Luther. What is the ultimate outcome of the process?
3. Why was it not important that more than a few be educated under the older theory of salvation?
4. Show how modern democratic government was a natural consequence of the Protestant position.
5. Why was universal education involved as a later but ultimate consequence of the position taken by the Protestants?
6. Explain why the local Church authorities, before 1520, tried so hard to prevent the establishment of vernacular schools.
7. Explain why the religious discussions of the Reformation should have so strongly stimulated a desire to read.
8. Explain the fixing in character of the German, French, and English languages by a single book. What had fixed the Italian?
9. Was Luther probably right when he wrote, in 1524, that the schools "were deteriorating throughout Germany"? Why?
10. Give reasons why Luther's appeals for schools were not more fruitful.
11. What was the significance of the position of Luther for the future education of girls?
12. Was Luther's idea that a clergyman should have had some experience as a teacher a good one, or not? Why?
13. How do you explain Luther's ideas as to coupling up elementary and trade education in his primary schools?
14. Point out the similarity of Luther's scheme for a school system with the German school system as finally evolved (Figure 96).
15. Show how Melanchthon's Saxony Plan differed from Luther's ideas. For the times was it a more practical plan? Why?
16. Explain why the Lutheran idea of personal responsibility for salvation made so little headway in England, and show that the natural educational consequences of this resulted.
17. Show what different conditions were likely to follow, in later centuries, from the different stands taken as to the relation of the State and Church to education by the German people by the middle of the sixteenth century, and by the English at the time of Elizabeth.
18. Compare the origin of the vernacular elementary-school teacher in Germany and England.
19. Leach estimates that, in 1546, there were approximately three hundred grammar schools in England for a total population of approximately two and one half millions. About what opportunities for grammar-school education did this afford?

SELECTED READINGS

In the accompanying *Book of Readings* the following selections are reproduced:

154. Rashdall: Diffusion of Education in Mediæval Times.
155. Times: The Vernacular Style of the Translation of the Bible.
156. Luther: To the Mayors and Magistrates of Germany.
157. Luther: *Dignity and Importance* of the Teacher's Work.

158. Luther: On the Duty of Compelling School Attendance.
159. Hamburg: An Example of a Lutheran *Kirchenordnung*.
160. Brieg: An Example of a Lutheran *Schuleordnung*.
161. Melanchthon: The Saxony School Plan.
162. Raumer: The School System Established in Würtemberg.
163. Duke Ernest: The *Schulemethodus* for Gotha.
164. Strype: The Supervision of a Teacher's Acts and Religious Beliefs in England.
 (*a*) Letter of Queen's Council on.
 (*b*) Dismissal of a Teacher for non-conformity.
165. Elizabeth: Penalties on Non-conforming Schoolmasters.
166. Statutes: English Act of Uniformity of 1662.
167. Carlisle: Oath of a Grammar School Master.
168. Strype: An English Elementary-School Teacher's License.
169. Cowper: Grammar School Statutes regarding Prayers.
170. Green: Effect of the Translation of the Bible into English.
171. Old MS.: Ignorance of the Monks at Canterbury and Messenden.
172. Parker: Refounding of the Cathedral School at Canterbury.
173. Nicholls: Origin of the English Poor-Law of 1601.
174. Statutes: The English Poor Law of 1601.

QUESTIONS ON THE READINGS

1. From the selection from Rashdall (154), what do you infer as to the effect of the Reformation on the schools? What kind of schools does Rashdall describe as existing?
2. Contrast the vernacular style of the Bible (155) with the Ciceronian.
3. Characterize the three extracts (156–58) from Luther.
4. How advanced was the ground taken by Luther (158)? Would we accept the logic of his argument to-day?
5. Just what do the Hamburg (159) and Brieg (160) *Ordnungen* indicate?
6. Compare Melanchthon's Saxony Plan (161) with Sturm's (137) and the French Collège de Guyenne (136), and grade the three in order of importance.
7. Show the close similarity of the Würtemberg plan of 1559–65 (162) and a modern German state school system.
8. How advanced for the time was the work of Duke Ernest of Gotha (163)?
9. What kind of a school attitude is indicated by the close supervision of English teachers, as described in 164 and 165?
10. What would be the natural effect on the teaching occupation of such legislation as the Act of Uniformity (166)?
11. Compare the form of license of an elementary teacher (168) with a modern form. What have we added and omitted?
12. What do the statutes regarding prayers (169) indicate as to the nature of the grammar schools of the time?
13. Characterize the educational importance of the translations of the Bible into the native tongues (170).
14. What are the marked features of the refounding act (172) for Canterbury cathedral school? What improvements are indicated?
15. State the steps in the development (173) of the English Poor-Law of 1601, just what the law provided for (174), and just what elements *necessary to* the creation of a state school system were incorporated *into it.*

SUPPLEMENTARY REFERENCES

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Woodward, W. H. *Education during the Renaissance.*

CHAPTER XIV

EDUCATIONAL RESULTS OF THE PROTESTANT REVOLTS

II. AMONG CALVINISTS AND CATHOLICS

3. *Educational work of the Calvinists*

The organizing work of Calvin. From the point of view of American educational history the most important developments in connection with the Reformation were those arising from Calvinism. While the Calvinistic faith was rather grim and forbidding, viewed from the modern standpoint, the Calvinists everywhere had a program for political, economic, and social progress which has left a deep impress on the history of mankind. This program demanded the education of all, and in the countries where Calvinism became dominant the leaders included general education in their scheme of religious, political, and social reform.[1] In the governmental program which Calvin drew up (1537) for the religious republic at Geneva (p. 298), he held that learning was "a public necessity to secure good political administration, sustain the Church unharmed, and maintain humanity among men."

In his plan for the schools of Geneva, published in 1538, he outlined a system of elementary education in the vernacular for all, which involved instruction in reading, writing, arithmetic, religion, careful grammatical drill, and training for civil as well as for ecclesiastical leadership. In his plan of 1541 he upholds the principle, as had Luther, that "the liberal arts and good training are aids to a full knowledge of the Word." This involved the organization of secondary schools, or *colleges* as he called them,

[1] "These Calvinists had a common program of broad scope — not merely doctrinal, but also political, economic, and social. Their common program and their social ideals demanded education of all as instruments of Providence for church and commonwealth. Their industrious habits and productive economic life provided funds for education. Their representative institutions in both church and commonwealth not only necessitated general diffusion of knowledge, but furnished the organization necessary for founding, supervising, and maintaining, in wholesome touch with the common man, both elementary and higher institutions of learning. Their disciplined and responsive conscience, their consequent intensity of moral conviction *and spirit* of self-sacrifice for the common weal, compelled them to realize, in *concrete and permanent* form, their ideals of college and common school." (Foster, *H. D., In Monroe's Cyclopedia of Education*, vol. 1, p. 499.)

following the French nomenclature, to prepare leaders for the ministry and the civil government through "instruction in the languages and humane science." In the colleges (secondary schools) which he organized at Geneva and in neighboring places to give such training, and which became models of their kind which were widely copied, the usual humanistic curriculum was combined with intensive religious instruction. These colleges became famous as institutions from which learned men came forth. The course of study in the seven classes of one of the Geneva colleges, which has been preserved for us, reveals the nature of the instruction (**R. 175**). The lowest class began with the letters, reading was taught from a French-Latin Catechism, and the usual Latin authors were read. Greek was begun in the fourth class, and, in addition to the usual Greek authors, the New Testament was read in Greek. In the higher classes, as was common also in German *gymnasia*, logic and rhetoric were taught to prepare pupils to analyze, argue, and defend the faith. Elocution was also given much importance in the upper classes as preparation for the ministry, two original orations being required each month. Psalms were sung, prayers offered, sermons preached and questioned on, and the Bible carefully studied. The men who went forth from the colleges of Geneva to teach and to preach the Calvinistic gospel were numbered by the hundreds.[1]

Calvin's great educational work at Geneva has been well summarized by a recent writer,[2] as follows:

> The strenuous moral training of the Genevese was an essential part of Calvin's work as an educator. All were trained to respect and obey laws, based upon Scripture, but enacted and enforced by representatives of the people, and without respect of persons. How fully the training of children, not merely in sound learning and doctrine, but also in manners, "good morals," and common sense was carried out is pictured in the delightful human *Colloquies* of Calvin's old teacher, Corderius (once a teacher at the College of Guyenne, p. 269), whom he twice established at Geneva. . . .
>
> Calvin's memorials to the Genevan magistrates, his drafts for civil law and municipal administration, his correspondence with reformers and statesmen, his epoch-making defense of interest taking, his growing tendency toward civil, religious, and economic liberty, his development of primary and university education, his intimate knowledge of the dialect and ways of thought of the common people of Geneva, and his

[1] In 1625 a list of the famous men of the city of Louvain, in Belgium, was printed. More than one *fourth of those listed* had studied in the colleges of Geneva.

[2] *Foster, H. D., Monroe's Cyclopedia of Education*, vol. 1, p. 491.

broad understanding of European princes, diplomats, and politics mark him out as a great political, economic, and educational as well as a religious reformer, a constructive social genius capable of reorganizing and moulding the whole life of a people.

The world owes much to the constructive, statesman-like genius of Calvin and those who followed him, and we in America probably most of all. Geneva became a refuge for the persecuted Protestants from other lands, and through such influences the ideas of Calvin spread to the Huguenots in France, the Walloons



FIG. 98. A FRENCH SCHOOL OF THE SEVENTEENTH CENTURY
(From an old woodcut by Abraham Bosse, 1611–78)

of the Dutch and Belgian Netherlands, the Germans in the Palatinate, the Presbyterians of Scotland, the Puritans in England, and later to the American colonies.

Calvinism in other lands. The great educational work done by the Calvinists in France, in the face of heavy persecution, deserves to be ranked with that of the Lutherans in Germany in its importance. Had the Calvinists had the same opportunity for free development the Lutherans had, and especially their state support, there can be little doubt that their work would have greatly exceeded the Lutherans in importance and influence on the future history of mankind. Beginning with one church in *1538, they had* 2150 churches by 1561, when the severe persecutions and religious wars began.

True to the Calvinistic teaching of putting principles into practice, they organized an extensive system of schools, extending from elementary education for all, through secondary schools or colleges, up to eight Huguenot universities. As a people they were thrifty and capable of making great sacrifices to carry out their educational ideals. The education they provided was not only religious but civil; not only intellectual but moral, social, and economic. Education was for all, rich and poor alike. Their synods made liberal appropriations for the universities, while municipalities provided for colleges and elementary education. They emphasized, in the lower schools, the study of the vernacular and arithmetic, and in the colleges Greek and the New Testament. The long list of famous teachers found in their universities reveals the character of their instruction. Foster has well summarized the distinguishing characteristics of Huguenot education in France, before they were driven from the land, as follows: [1]

> The significant characteristics of Huguenot education were: an emphasis on the education of the laity; training for "the republic" and "society" as well as for the Church; insistence upon virtue as well as knowledge; the wide-spread demand for education, and a view of it as essential to liberty of conscience; a comprehensive working system of elementary, collegiate, and university training for all, poor as well as rich; an astonishing familiarity with Scripture, even among the lowest classes; utilization of representative church organization for founding, supporting, and unifying education; readiness to sacrifice for education, a spirit of carrying a thing through at any cost; business-like supervision of money, and systematic supervision of both professors and students; a notable emphasis on vernacular, arithmetic, Greek, use of full texts, and libraries; and finally a progressive spirit of inquiry and investigation.

In the Palatinate (see map, Figure 88) some progress in founding churches and schools was made, especially about Strassburg, and the universities of Heidelberg and Marburg became the centers of Huguenot teaching. In the Dutch Netherlands, and in that part of the Belgian Netherlands inhabited by the Walloons, Calvinist ideas as to education dominated. The universities of Leyden (f. 1575), Groningen (f. 1614), Amsterdam (f. 1630), and Utrecht (f. 1636) were Calvinistic, and closely in touch with the Calvinists and Huguenots of German lands and France. Popular education was looked after among these people as it was in

[1] *In Monroe's Cyclopedia of Education*, vol. 1, p. 498.

Calvinistic France and Geneva. The Church Synod of The Hague (1586) ordered the establishment of schools in the cities, and in 1618 the Great Synod held at Dort (**R. 176**) ordered that:

> Schools in which the young shall be properly instructed in piety and fundamentals of Christian doctrine shall be instituted not only in cities, but also in towns and country places where heretofore none have existed. The Christian magistracy shall be requested that honorable stipends be provided for teachers, and that well-qualified persons may be employed and enabled to devote themselves to that function; and especially that the children of the poor may be gratuitously instructed by them and not be excluded from the benefits of schools.

Further provisions were made as to the certificating of schoolmasters, and the pastors were made superintendents of the schools, to visit, examine, encourage, advise, and report (**R. 176**). Provision for the free education of the poor became common, and elementary education was made accessible to all. The careful provision for education made by the province of Utrecht (1590, 1612) (**R. 178**) was typical of Dutch activity. The province of Drenthe ordered (1630) a school tax paid for all children over seven, whether attending school or not. The province of Overyssel levied (1666) a school tax for all children from eight to twelve years of age. The province of Groningen constituted the pastors the attendance officers to see that the children got to school. Amsterdam and many other Dutch cities demanded an *examination of* all teachers before being licensed to teach. By *the middle of the* seventeenth century a good system of schools

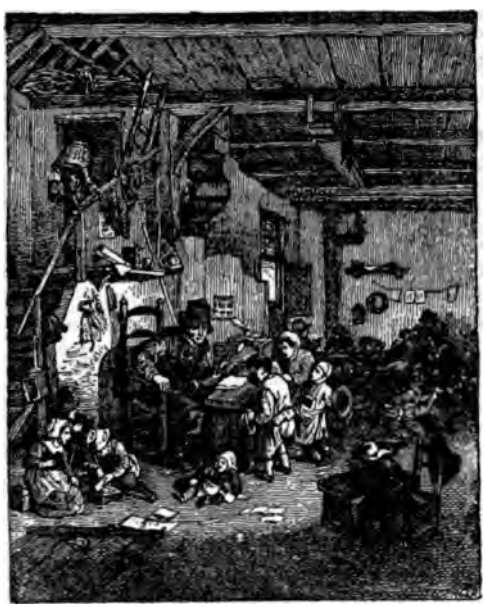


FIG. 99. A DUTCH VILLAGE SCHOOL
(After a painting by Adrian Ostade, dated 1662, now in the Louvre, at Paris)

seems to have been provided generally [1] by the Dutch and the Belgian Walloons (**R. 178**). That the teaching of religion was the main function of the Dutch elementary schools, as of all other vernacular schools of the time, is seen from the official lists of the textbooks used (**R. 178**).

John Knox, the leader of the Scottish Reformation (1560), who had spent some time at Geneva and who was deeply impressed by the Calvinistic religious state found there, introduced the Calvinistic religious and educational ideas into Scotland. His *Book of Discipline for the Scottish Church* (1560), framed closely on the Genevan model, contained a chapter devoted to education in which he proposed:

> That everie severall churche have a schoolmaister appointed, such a one as is able at least to teach Grammar and the Latin tung, yf the Town be of any reputation. Yf it be upaland . . . then must either the Reider or the Minister take cayre over the children . . . to instruct them in their first rudementie and especially in the catechisme.



FIG. 100. JOHN KNOX (1505?–72)

The educational plan proposed by Knox would have called for a large expenditure of money, and this the thrifty Scotch were not ready for. Knox and his followers then proposed to endow the new schools from the old church and monastic foundations, but the Scottish nobles hoped to share in these, as had the English nobility under Henry VIII, and Knox's plan was not approved. This delayed the establishment of a real national system of education for Scotland until the nineteenth century. The new Church, however, took over the superintendence of education in Scotland, and when parish schools were finally established by decree of the Privy Council, in 1616, and by the legislation of 1633 and 1646 (**R. 179**), the Church was given an important share in their organization and management. These schools, while not always sufficient in number to meet the educational needs, were well taught, and have deeply influenced the national character.

[1] "That public schools abounded throughout the Netherlands is evident. Every study of the archives of town or province discloses their presence. The minutes of every religious body bear overwhelming testimony not only to the existence of schools, but also a zealous interest in their maintenance." (Kilpatrick, W. H., *Dutch Schools of New Netherlands*, p. 37.)

4. *The Counter-Reformation of the Catholics*

The Jesuit Order. The Protestant Revolt made but little headway in Italy, Spain, Portugal, much of France, or southern Belgium (see map, p. 296). Italy was scarcely disturbed at all, while in France, where of all these countries the reform ideas had made greatest progress, nine tenths of the people remained loyal to Rome. In a general way it may be stated that those parts of western Europe which had once formed an integral part of the old Roman Empire remained loyal to the Roman Church, while those which had been the homes of the Germanic tribes revolted. Now it naturally happened that the countries which remained loyal to the old Church experienced none of the feelings of the necessity for education as a means to personal salvation which the Lutherans and Calvinists felt. There, too, the church system of education which had developed during the long Middle Ages remained undisturbed and largely unchanged. The Church as an institution, though, learned from the Protestants the value of education as a means to larger ends, and soon set about using it.[1]

After the Church Council of Trent (1545–63), where definite church reform measures were carried through (p. 303), the Catholics inaugurated what has since been called a counter-reformation, in an effort to hold lands which were still loyal and to win back lands which had been lost. Besides reforming the practices and outward lives of the churchmen, and reforming some church practices and methods, the Church inaugurated a campaign of educational propaganda. In this last the chief reliance was upon a new and a very useful organization officially known as the "Society of Jesus," but more commonly called the "Jesuit Order." This had been founded, in 1534, by a Spanish knight, pilgrim, man of large ideas, and scholar by the name of Ignatius Loyola, and had been sanctioned as an Order of the Church by Pope Paul III, in 1540. It was organized along strictly military lines, all members being responsible to its General, and he in turn alone to the Pope. The quiet life of the cloister was abandoned for a life

[1] For long the Church had had the Inquisition, but, while it had rendered loyal and iniquitous service, the results had been in no way commensurate with the bitter hatred which its work awakened. Excommunication, persecution, imprisonment, the stake, and the sword had been tried extensively, but with only partial success. In education the reformers had shown the Church a new method, which was positive and effective and did not awaken opposition, and from the reformer's zeal for Latin *grammar schools to* provide an intelligent ministry the Church took its cue of *establishing schools to* train its future leaders. It was a long-headed and far-sighted *plan, and its* success was proportionately large.

of open warfare under a military discipline. The Jesuit was to live in the world, and all peculiarities of dress or rule which might prove an obstacle to worldly success were suppressed. The purposes of the Order were to combat heresy, to advance the interests of the Church, and to strengthen the authority of the Papacy. Its motto was *Omnia ad Majorem Dei Gloriam* (that is, All for the greater glory of God), and the means to be employed by it to accomplish these ends were the pulpit, the confessional, the mission, and the school. Of these the school was given the place of first importance. Realizing clearly that the real cause of the Reformation had been the ignorance, neglect, and vicious lives of so many monks and priests and the extortion and neglect practiced by the Church, and that the chief difficulty was in the higher places of authority, it became the prime principle of the Order to live upright and industrious lives themselves, and to try to reach and train those likely to be the future leaders in Church and State. With the education of the masses of the people the Order was not concerned.[1] Our interest lies only with the educational work of this Order, a work in which it was remarkably successful and through which it exercised a very large influence.



FIG. 101. IGNATIUS DE LOYOLA (1491–1556)

Great success of the Order. The service of the Order to the Church in combating Protestant heresies was very marked. Beginning in a small way, the Order, by 1600, had established two hundred colleges (Latin secondary schools), universities, and training seminaries; by 1640, 372; by 1706 (150 years after the death of its founder), 769; and by 1756, 728. In 1773, when the Order was for a time abolished,[2] after it had been driven out of a

[1] This is not true of their missions in foreign lands, where the mission priests usually gave elementary instruction. Elementary schools were maintained in the Jesuit missions of North and South America. Thus a mission school was established at Quebec as early as 1635, and one at Newtown, in Catholic Maryland, in 1640. After 1740 elementary parish schools were opened by the Jesuits among the German Catholics in Pennsylvania. From these beginnings Catholic parish schools have been developed in the United States.

[2] The Order was reëstablished in 1814 and it has since been allowed to reëstablish itself in most countries, though not in France or Germany. There are 41 Jesuit colleges in America, in 21 states. (For list see Monroe's *Cyclopedia of Education*, vol. III, p. 540.) In the revision of its course of instruction, in 1832, modern studies were added, but the Society has never played any such conspicuous part in education since its reëstablishment as it did during the seventeenth and eighteenth centuries.

number of European countries because of the unscrupulous methods it adopted and the continual application of its doctrine that the end justifies the means, the Order had 22,589 members, about half of whom were teachers. Its colleges (secondary schools) and universities were most numerous and its work most energetically carried on in northern France, Belgium, Holland, the German States, Austria, Poland, and Hungary. Here was the great battle line, and here the Jesuits deeply entrenched themselves. In these portions of Europe alone there were, in 1750, 217 colleges, 55 seminaries, 24 houses for novitiates, and 160 missions. In France alone there were 92 colleges. They did much, single-handed, to roll back the tide of Protestantism which had advanced over half of western Europe, and to hold other countries true to the ancient faith.

The colleges were usually large and well-supported institutions, with dormitories, classrooms, dining-halls and play-grounds. The usual number of scholars in each was about 300, though some had an attendance of 600 to 800, and a few as high as 2000. At their period of maximum influence the colleges and universities of the Order probably enrolled a total of 200,000 students. Their graduates were prominent in every scholarly and governmental activity of the time. As far as possible the pupils were a selected class to whom the Order offered free instruction. The children of the nobility and gentry, and the brightest and most promising youths of the different lands were drawn into their schools. The children of many Protestants, also, were attracted by the high quality of the instruction offered. There they were given the best secondary-school education of the time, and received, at an impressionable age, the peculiar Jesuit stamp.[1] Bacon gave his opinion as to the success of their instruction in the following sentence: "As for the pedagogical part, the shortest rule would be, Consult the schools of the Jesuits; for nothing better has been put in practice." (*De Argumentis*, VI, 4.)[2]

[1] It is an interesting speculation as to whether the fact that the Jesuits made such headway in German lands, and so deeply impressed their training on the children of the nobility there, has had any connection with the attitude of German and Austrian political leaders for two centuries that the end justifies the means, however unworthy the means may be.

[2] By the middle of the eighteenth century the Jesuits had lost much of their former vigor, and their colleges their former large influence. They had become powerful and arrogant, mixed deeply in political intrigues, quarreled with any one who crossed their path, and refused to change their instruction to meet new intellectual needs. They were finally driven from France, Spain, Portugal, and German lands, and were ultimately abolished as an Order.

Success of the Jesuit schools. Displaying a genius for organization worthy of Rome, Loyola and his followers absorbed the best educational ideas of the time as to school organization and management and curriculum, and incorporated these into their educational plan. Too practical to make many changes, but with a keen eye for what was best, they accepted the best and used it much as others had worked it out. From the municipal college of Guyenne (p. 269), the colleges of Calvin (p. 331), and Sturm's organization at Strassburg (p. 273), they adopted the plan of class organization, with a teacher for each class. From the Calvinists they obtained the idea of the careful supervision of instruction, which was worked out in the Prefect of Studies for their colleges. In their course of study they incorporated the Ciceronian ideal of the humanistic learning, and as careful religious instruction as was provided by any of the reformers. From the Italian court schools they took the idea of physical training. The method of instruction and classroom management which they worked out was detailed, practical, and for their purposes excellent. The reasons for their educational work gave them a clearly defined aim and purpose. The military brotherhood type of organization, the lifetime of celibate service, and the opportunity to sort the carefully selected members according to their ability for service in the different lines of the Order gave them the best-selected teaching force in Europe, and these men they trained for the teaching service with a thoroughness unknown before and seldom equaled since. Knowing why they were at work and what ends they should achieve, intolerant of opposition, intensely practical in all their work, and possessed of an indefatigable zeal in the accomplishment of their purpose, they gave Europe in general and northern continental Europe in particular a system of secondary schools and universities possessed of a high degree of effectiveness, which, combined with religious warfare and persecution, in time drove out or dwarfed all competing institutions in the countries they were able to control.

That their educational system, viewed from a modern liberal-education standpoint, equaled in effectiveness for liberal-education ends such institutions as the court schools of Vittorino da Feltre, Batista da Guarona, or other Italian humanistic educators of the Renaissance (p. 267); the French and Swiss colleges of Calvin (p. 331); Colet's school at Saint Paul's (p. 275), and the better *English grammar schools;* or the schools of the Brethren of the

Common Life in the Netherlands (p. 271); would hardly be contended for to-day. Such, though, was not their purpose. To proselyte for the Church rather than to liberalize — from their point of view there had been too much liberalizing already — was their ultimate aim, and their educational work was organized to suppress rather than to awaken more Protestant heresy. The work of this Order was so successful, and for two centuries so dominated secondary and higher education in Europe, that it will pay us to examine a little more closely their educational organization to see more fully the reasons for their large success. In so doing we will examine three points — their school organization, their methods of instruction, and the training of their teachers.

Jesuit school organization. Each college was presided over by a *Rector*, who was in effect the president of the institution, and a *Prefect of Studies*, who was the superintendent of instruction. Below these were the *Professors* or teachers, the *House Prefect*, the official disciplinarian of the institution, known as the *Corrector*, the monitors, and the students. There were two classes of students, *interns* and *externs*. Their schools were divided into two courses. The *studia inferiora*, or lower school, which covered the six years from ten to twelve years of age up to sixteen to eighteen; and the *studia superiora*, which followed, and included the higher college and university courses, with philosophy and theology as the important subjects. For the whole, there was a very carefully worked-out manual of instruction (**R. 180**) known as the *Ratio Studiorum*.[1]

The boy entering a Jesuit college was supposed to have previously learned how to read Latin. The first three years were given to learning Latin grammar and a little Greek. In the fourth year Latin and Greek authors were begun, and in the fifth and sixth years a rhetorical study of the Latin authors was made. Latin was the language of the classroom and the playground as well, the mother tongue being used only by permission. Greek was studied through the medium of the Latin. The retention of Latin as the language of all scholarly and political intercourse, and the cultivation of the style and speech of Cicero as the standard of purity and elegance, were the ends aimed at. Careful at-

[1] The care with which the *Ratio Studiorum* was worked out is typical of the thoroughness of the Order. A preliminary outline of work was followed for many years, the whole being experimental. Reports on it were made, and finally a preliminary *Ratio* was issued, in 1586. This was again revised and cast into final form, in 1599. In this form it remained until 1832, when some modern studies were added.





NAME OF THE PROVINCE	NUMBER OF			
	MEMBERS	ACAD. & COL.	RES.	VISI
I FLANDREAU-BELGIAN PROVINCE	550	20	1	1
II GALLO-BELGIAN PROVINCE	463	20	2	2
III LOWER RHINE PROVINCE	781	19	7	2
IV UPPER RHINE PROVINCE	430	16	6	1
V UPPER GERMAN PROVINCE	984	27	7	12
VI BOHEMIAN PROVINCE	1,336	28	13	28
VII AUSTRIAN PROVINCE	1,508	31	23	31
VIII POLISH PROVINCE	874	24	7	6
IX RUSSIAN PROVINCE (LITTAU)	839	23	7	5
X ENGLISH PROVINCE	1	12	6	2
TOTALS	7,765	220	79	90


THE SPREAD OF
RTHERN TER-
EAR 1725
V, 524)
S. Seminaries.
IX RUSSIAN PROVINCE (LITTAU)
X ENGLISH PROVINCE
XI SCOTTISH PROVINCE
XII IRISH PROVINCE
Dagö
Osel
Lake Peipus
Gulf of Riga
Faro
Gothland
LIVONIA
COURLAND
Mitau
Illuchta
Dünaburg
Posawesz
Kroscho
Polock K.
Witebsk
Tilsit
Königsberg
Kowno
Danzig Bay
Danzig
Braunsberg
Preyel
Rügen
POMERANIA
Stettin
Bergosky
Graudenz
Thorn
Marienburg
Rossel
Schonek
Grodno
Minsk
Mogilef
Orscha
Nowogrudeck
Bobruisk
Slutzk K.
Newisch
IX
Lamza
Pultusk
Plock
Meserits
Posen
Brzesye
Warthe
Kalisch K.
Warschau
Draglesyn
Pinsk
Pripet
Rawa
Pietrkow
POLAND
Lublin S.
Sandomierz S.K.
Krasnystaw
VOLKYNIA
Ovrutsch
VI
SILESIA
Breslau K.
Brieg
Oppeln
Neisse S.
Glatz S.
Glogau S.
Luzk
Ostrog K.
Kremenetz
VIII
Jaroslaw
Krakau
Tarnow S.
Olmütz S.K.
Teschen K.
Krosno
Przemysl
Lemberg
Saiddor
GALICIA
Leutschau S.
Kaschau S.K.
Tyrnau
Neusohl
Rosenau
Patak
Ughvar S.
Staalahwew
Kamenez
PODOLIA
Bar
Wiener K.
Schemnitz
Cyongios
Szathmar
Nagybanya
MOLDAVIA
Pruth
Sereth
HUNGARY
Siebenburgen
Klausenberg P.S.
Gr. Wardein
Varsahely (Neumarkt)
Udvarhely
Temeswar
WALACHIA
Peterwardein
Danube
Danube
Drave
Save
Theiss
Maros
Bega
Aluta
Gurgy
Oder
Elbe
Vistula
Niemen
Dwina
Lovat
Volga
Dniepr
Desna
Sula
Worskla
Donetz
Don
Tanais
Sea of Azof
Black Sea
Euxine
Crimea
Taurida
Perekop
Isthmus
Precop
Nogay Tartars
Circassia
Caucasus
Mountains
Georgia
Mingrelia
Imeretia
Caspian Sea
Mare Caspium
Persia
Media
Armenia
Turcomania
Kurdistan
Mesopotamia
Babylonia
Arabia
Deserta
Arabia Petraea
Egypt
Nile
Red Sea
Mare Rubrum
Abyssinia
Nubia
Sennaar
Dongola
Barbary
Fez
Morocco
Algiers
Tripoli
Tunis
Mediterranean Sea
Mare Mediterraneum
Sicily
Malta
Candia
Cyprus
Rhodes
Archipelago
Constantinople
Natolia
Bithynia
Troas
Mysia
Lydia
Caria
Phrygia
Pisidia
Lycaonia
Cilicia
Isauria
Pamphylia
Syria
Damascus
Palestine
Jerusalem
Jordan
Dead Sea
Lake Asphaltites
Gaza
Alexandria
Cairo
Grand Cairo
Rosetta
Damietta
Suez
Mecca
Medina
Aden
Gulf of Persia
Sinus Persicus
Ormus
Gulf of Arabia
Sinus Arabicus
Babelmandel
Straits of Babelmandel
Fretum Babelmandel
Ethiopia
Interior
Monomotapa
Mozambique
Sofala
Terra de Natal
Cape of Good Hope
Promontorium Bonæ Spei
Ethiopia
Exterior
Guinea
Negroland
Gambia
Senegal
Cape Verd
Cape Verd Islands
Canary Islands
Fortunate Islands
Madeira
Azores
Terceira
Fayal
Pico
Flores
Corvo
Graciosa
St. George
St. Michael
Santa Maria
Ocean
Mare Atlantic
Mare Pacific
Mare del Zur
Mare Magellanicum
Magellan's Straits
Fretum Magellanicum
Terra del Fuego
Terra Magellanica
Patagonia
Chili
Peru
Lima
Callao
Arica
Potosi
Cusco
Paraguay
Assumption
Rio de la Plata
Buenos Ayres
Tucuman
Rio Grande
Rio de Janeiro
Brasil
Bahia
Pernambuco
Tamaraca
Paraiba
Rio Grande
Seara
Maranhan
Para
Rio Negro
Amazons
Orinoco
Terra Firma
Darien
Panama
Isthmus of Panama
Isthmus Panamensis
Nombre de Dios
Porto Bello
Carthagena
Santa Martha
Rio de la Hacha
Maracaibo
Caracas
Coro
Cumana
Trinidad
Margarita
Curaçao
Aruba
Bonaire
Tortuga
Hispaniola
St. Domingo
Jamaica
Spanish Town
Port Royal
Cuba
Havana
Florida
St. Augustine
Bahama Islands
Lucayos
Gulf of Florida
Sinus Floridanus
Gulf of Mexico
Sinus Mexicanus
Mexico
Mexico City
Vera Cruz
Tabasco
Campeachy
Yucatan
Honduras
Nicaragua
Costa Rica
Veragua
Guatimala
Chiapa
Guaxaca
Acapulco
Tehuantepec
Isthmus of Tehuantepec
Isthmus Tehuantepecensis
Panuco
Tampico
Mexicana
Florida
Apalachia
Carolina
Virginia
Maryland
Delaware
Pennsylvania
New Jersey
New York
New England
Canada
Quebec
Nova Scotia
Acadie
Cape Breton
Newfoundland
Labrador
Esquimaux
Greenland
Hudson's Bay
Mare Hudsonicum
Hudson's Straits
Fretum Hudsonicum
Baffin's Bay
Mare Baffinianum
Davis's Straits
Fretum Davidis
Terra Labrador
Terra Esquimaux
Terra Groenlandia
Iceland
Hecla
Greenland
Spitzbergen
Nova Zembla
Lapland
Finland
Sweden
Norway
Gothland
Scandinavia
Denmark
Zealand
Funen
Jutland
Holstein
Mecklenburg
Pomerania
Rügen
Lubeck
Hamburg
Bremen
Oldenburg
Ostfriesland
Westphalia
Munster
Osnaburg
Paderborn
Hesse
Cassel
Marpurg
Fulda
Hanau
Frankfort
Mentz
Nassau
Weilburg
Dillenburg
Siegen
Wetzlar
Coblentz
Treves
Cologne
Juliers
Berg
Duchy of Berg
Düsseldorf
Elberfeld
Wesel
Cleves
Duchy of Cleves
Emmerich
Arnheim
Nimeguen
Utrecht
Amsterdam
Haerlem
Leyden
Rotterdam
Dort
Middleburg
Flushing
Zealand
Holland
Friesland
Groningen
Overyssel
Gelderland
Brabant
Antwerp
Mechlin
Louvain
Brussels
Namur
Liege
Limburg
Luxemburg
Hainault
Mons
Valenciennes
Cambray
Artois
Arras
Lisle
Tournay
Flanders
Ghent
Bruges
Ostend
Dunkirk
Calais
Boulogne
Picardy
Amiens
Abbeville
Normandy
Rouen
Dieppe
Havre de Grace
Caen
Bayeux
Cherbourg
Isle of Wight
Portsmouth
Southampton
Salisbury
Dorsetshire
Weymouth
Exeter
Devonshire
Plymouth
Cornwall
Falmouth
Land's End
Scilly Islands
Bristol
Somersetshire
Wells
Bath
Gloucestershire
Worcestershire
Herefordshire
Monmouthshire
Wales
Caermarthen
Pembroke
Milford Haven
Cardigan
Aberystwith
Carnarvon
Anglesey
Holyhead
Chester
Shropshire
Staffordshire
Warwickshire
Coventry
Oxfordshire
Oxford
Berkshire
Windsor
Reading
Wiltshire
Hampshire
Sussex
Chichester
Brighthelmstone
Dover
Kent
Canterbury
Rochester
Thames
Medway
Essex
Colchester
Harwich
Suffolk
Ipswich
Yarmouth
Norfolk
Lincolnshire
Boston
Lincoln
Rutlandshire
Northamptonshire
Buckinghamshire
Hertfordshire
Bedfordshire
Cambridgeshire
Cambridge
Huntingdonshire
Leicestershire
Nottinghamshire
Derbyshire
Yorkshire
York
Hull
Scarborough
Whitby
Durham
Northumberland
Berwick
Cumberland
Carlisle
Westmoreland
Lancashire
Liverpool
Manchester
Preston
Isle of Man
Douglas
Ireland
Dublin
Drogheda
Wicklow
Wexford
Waterford
Cork
Kinsale
Bantry Bay
Kerry
Limerick
Clare
Galway
Connaught
Mayo
Sligo
Donegal
Londonderry
Ulster
Antrim
Belfast
Down
Armagh
Tyrone
Fermanagh
Monaghan
Cavan
Leitrim
Roscommon
Longford
Meath
Kildare
Queen's County
King's County
Tipperary
Kilkenny
Carlow
Leinster
Munster
Scotland
Edinburgh
Leith
Glasgow
Dumbarton
Stirling
Perth
Dundee
Aberdeen
Inverness
Fort George
Fort Augustus
Fort William
Argyle
Mull
Iona
Skye
Hebrides
Orkneys
Shetland
Caledonia
Galloway
Ayr
Dumfries
Annandale
Tweedale
Lothian
Berwick
Fife
Angus
Mearns
Buchan
Ross
Cromarty
Sutherland
Caithness
Murray
Nairn
Badenoch
Lochaber
Glencoe
Breadalbane
Athol
Monteith
Clackmannan
Kinross
Strathearn
Menteith
Lennox
Renfrew
Clydesdale
Lanark
Peebles
Selkirk
Roxburgh
Teviotdale
Liddesdale
Eskdale
Annandale
Nithsdale
Kyle
Carrick
Cunningham
Arran
Bute
Kintyre
Lorn
Morven
Mull
Iona
Skye
Hebrides
Orkneys
Shetland
Caledonia
Galloway
Ayr
Dumfries
Annandale
Tweedale
Lothian
Berwick
Fife
Angus
Mearns
Buchan
Ross
Cromarty
Sutherland
Caithness
Murray
Nairn
Badenoch
Lochaber
Glencoe
Breadalbane
Athol
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Selkirk
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Teviotdale
Liddesdale
Eskdale
Annandale
Nithsdale
Kyle
Carrick
Cunningham
Arran
Bute
Kintyre
Lorn
Morven



tention was given to the health and sports of the pupils, and special regard was paid to moral and religious training.

Following this lower school of six years came the so-called philosophical course of three years (sometimes two). The study of the Latin classics and rhetoric was continued, and dialectics (logic) and some metaphysics were added. The nine years together covered about the same scope as Sturm's school (**R.** 137) at Strassburg (p. 273), but was more formal in character and partook more of the nature of the later formalized humanistic schools. Slight variations were allowed in places, to meet particular local needs, but this course of study remained practically unchanged until 1832, when some history, geography, and elementary mathematics and science were added to the lower schools, and advanced mathematics and science to the philosophical course. In 1906 each Province of the Order was permitted to change the *Ratio* further, if necessary to adjust it better to local needs. Above the philosophical course a course of four or six years in philosophy and theology prepared for the higher work of the Order, the four-year course for preaching and the six-year course for teaching.

Jesuit school methods. The characteristic method of the schools was oral, with a consequent closeness of contact of teacher and pupils. This closeness of contact and sympathy was further retained by the system whereby all punishment was given by the official Corrector of the institution. Their method, like that of the modern German *Volkschule*, was distinctly a teaching and not a questioning method. The teacher planned and gave the instruction; the pupils received it. In the upper classes the teacher explained the general meaning of the entire passage; then the construction of each part; then gave the historical, geographical, and archæological information needed further to explain the passage; then called attention to the rhetorical and poetical forms and rules; then compared the style with that of other writers; and finally drew the moral lesson. The memory was drilled; but little training of the judgment or understanding was given. Thoroughness, memory drills, and the disciplinary value of studies were foundation stones in the Jesuit's educational theory. Repetition, they said, was the mother of memory. Each day the work of the previous day was reviewed, and there were further reviews at the end of each week, month, and year.

To retain the interest of the pupils amid such a load of memoriz-

as had those in Protestant lands (R. 146), and their universities far more narrow and intolerant.

The elements of strength and weakness in the Jesuit system of education has been well summarized by Dabney,[1] in the following words:

> The order of the Jesuits was anti-democratic, and was founded to uphold authority, and to antagonize the right of private judgment. With masterly skill they ruled the Catholic world for about two centuries; and, in the beginning of their activity, performed services of great value to mankind. For, although they aimed, in their system of education, to fit pupils merely for so-called practical avocations, and to avoid all subjects likely to stimulate them to independent thought, it was nevertheless the best system which had then appeared. In dropping the old scholastic methods, and teaching new and fresher subjects, although with the intention of perverting them to their own ends, they sowed, in fact, the germs of their own decay. In spite of their wonderful organization, and their indefatigable industry as courtiers in royal palaces, as professors in the universities, as teachers in the schools, as preachers, as confessors, and as missionaries, they were utterly unable to crush the spirit of doubt and inquiry. During the first half century of their existence they were intellectually in advance of their age; but after that they gradually dropped behind it, and, instead of diffusing knowledge, saw that the only hope of retaining their dominion was to oppose it with all their might.

The Church and elementary education. As was stated on a preceding page, the countries which remained loyal to the Church experienced none of the Protestant feeling as to the necessity for universal education for individual salvation. In such lands the church system of education which had grown up during the Middle Ages remained undisturbed, and was expanded but slowly with the passage of time. The Church, never having made general provision for education, was not prepared for such work. Teachers were scarce, there was no theory of education except the religious theory, and few knew what to do or how to do it. Many churchmen, too, did not see the need for doing anything. Nevertheless the Church, spurred on by the new demands of a world fast becoming modern, and by the exhortations of the official representatives of the people,[2] now began to make extra efforts, in the large cathedral cities, to remedy the deficiency of

[1] Dabney, R. H., The Causes of the French Revolution, p. 203.

[2] For example, the "States-General" of France met four times during the seventeenth century, with weighty problems of religion and state for consideration, yet [redacted] meetings resolutions were passed urging the clergy to establish [redacted] and villages, and a general system of compulsory

more than a thousand years. In Paris, for example, which was typical of other French cities, the Church organized a regular system of elementary schools, with teachers licensed by the Precentor of the cathedral of Notre Dame and nominally under his supervision, in which instruction was offered to children of the artisan and laboring classes, of both sexes, "in reading, writing, reckoning, the rudiments of Latin Grammar, Catechism, and singing." By 1675 these "Little Schools" in Paris came to contain "upwards of 5000 pupils, taught by some 330 masters and mistresses." All such schools, of course, remained under the immediate control of the Church, and modern state systems of education in the Catholic States are late nineteenth-century productions. In Spain, Portugal, Poland, and the Balkan States, general state systems of education have not even as yet been evolved.

The general effect of the Reformation, though, was to stimulate the Church to greater activity in elementary, as well as in secondary and higher education. In the sixteenth and seventeenth centuries we find a large number of decrees by church councils and exhortations by bishops urging the extension of the existing church system of education, so as to supply at least religious training to all the children of the faithful. As a result a number of teaching orders were organized, the aim of which was to assist the Church in providing elementary and religious education for the children of the laboring and artisan classes in the cities.

Teaching orders established. The teaching orders for elementary education, founded before the eighteenth century, with the dates of their foundation, were:

*1535 — The Order of Ursulines. (U.S., 1729.)
1592 — The Congregation of Christian Doctrine.
*1598 — The Sisters of Notre Dame. (U.S., 1847.)
*1610 — The Visitation Nuns. (U.S., 1799.)
1621 — Patres piarum scholarum (Piarists). First school opened in 1597; authorized by the Pope, 1662.
1627 — The Daughters of the Presentation.
*1633 — The Sisters of Charity of Saint Vincent de Paul. (U.S., 1809.)
1637 — The Port Royalists (Jansenists). (Suppressed in 1661.)
1643 — The Sisters of Providence.
*1650 — The Sisters of Saint Joseph. Rule based on Jesuits. (U.S., 19th C.)
1652 — The Sisters of Mary of Saint Charles Borromeo.
1684 — The Sisters of the Presentation of the Blessed Virgin.
*1684 — *The Brothers of the* Christian Schools. (U.S., 1845.)

* Have communities in the United States, the date being that of the first one established. See Monroe, *Cyclopedia of Education*, vol. v, p. 528.

All of these, except the Ursulines and the Piarists, were founded in France, many of them originating in Paris. The first has long been prominent in Italy, and is now found in all lands. The second was founded by Father César de Bus, at Cavaillon, Avignon, in southern France, and its purpose was to teach the Catechism to the young. The catechetical schools of this Order were prominent in southern France up to the time of the French Revolution. The third was founded by the Blessed Peter Fourier (1565–1640), in 1598, and played an important part in the education of girls in France, particularly in Lorraine, where Calvinism had made much headway. This noted Order offered free instruction to tradesmen's daughters, not only in religion but in "that which concerns this present life and its maintenance" as well. The girls were taught "reading, writing, arithmetic, sewing, and divers manual arts, honorable and peculiarly suitable for girls" of their station of life. At a time when handwork had not been thought of for boys, the beginnings of such work were here introduced for girls. In 1640 Fourier gave the sisterhood a constitution and a rule, which were revised and perfected in 1694. In this he laid down rules for the organization and management of schools, methods of teaching the different branches, and provided for a rudimentary form of class organization. The following extract from the Rule illustrates the approach to class organization which he devised:



FIG. 103.
AN URSULINE
Order founded, 1535

> The inspectress, or mistress of the class, shall endeavor, as far as it possibly can be carried out, that all the pupils of the same mistress have each the same book, in order to learn and read therein the same lesson; so that, whilst one is reading hers in an audible and intelligible voice before the mistress, all the others, following her and following this lesson, in their books at the same time, may learn it sooner, more readily, and more perfectly.[1]

The Piarists were established in Italy, the first school being opened in Rome, in 1597, by a Spanish priest who had studied at

[1] *Les vrais Constitutions des Religieuses de la Congrégation de Nostre Dame*, chap. XI, sec. 6, 2d ed., Toul, 1694.

Lerida, Valencia, and Alcalá. Being struck by the lack of educational opportunities for the poor, he opened a free school for their instruction. By 1606 he had 900 pupils in his schools, and by 1613 he had 1200. In 1621 Pope Gregory XV gave his work definite recognition by establishing it a teaching Order for elementary (reading, writing, counting, religion) education, modeled on that of the Jesuits. The Order did some work in Italy and Spain, but its chief services were in border Catholic lands. In 1631 it began work in Moravia, in 1640 in Bohemia, in 1642 in Poland, and after 1648 in Austria and Hungary. The members wore a habit much like that of the Jesuits, had a scheme of studies similar to their *Ratio*, and were organized by provinces and were under discipline as were the members of the older Order.

The Jansenists, founded by Saint Cyran, at Port Royal, conducted a very interesting and progressive educational experiment, and their schools have become known to history as the "Little Schools of Port Royal." The congregation was a reaction against the work and methods of the Jesuits. It included both elementary and secondary education, but never extended itself, and probably never had more than sixty pupils and teachers. After seventeen years of work it was suppressed through the opposition of the Jesuits, and its members fled to the Netherlands. There they wrote those books which have explained to succeeding generations what they attempted,[1] and which have revealed what a modern type of educational experiment they conducted. The progressive and modern nature of their teaching, in an age of suspicion and intolerance, condemned them to extinction. Yet despite the progressive nature of their instruction, the intense religious atmosphere which they threw about all their work (**R. 181**) reveals the dominant characteristic of most education for church ends at the time.

The Brothers of the Christian Schools. The largest and most influential of the teaching orders established for elementary education was the "Institute of the Brothers of the Christian Schools," founded by Father La Salle at Rouen, in 1684, and sanctioned by the King and Pope in 1724. As early as 1679 La Salle had begun a school at Rheims, and in 1684 he organized his disciples, prescribed a costume to be worn, and outlined the work of the brotherhood (**R. 182**). The object was to provide free ele-

[1] See especially Felix Cadet, *Port-Royal Education* (Scribners, New York, 1898), for translations of many of the brief pedagogical writings of members of the Order.

mentary and religious instruction in the vernacular for the children of the working classes, and to do for elementary education what the Jesuits had done for secondary education. La Salle's *Conduct of Schools*, first published in 1720, was the *ratio studiorum* of his order. His work marks the real beginning of free primary instruction in the vernacular in France. In addition to elementary schools, a few of what we should call part-time continuation schools were organized for children engaged in commerce and industry. Realizing better than the Jesuits the need for well-trained rather than highly educated teachers for little children, and unable to supply members to meet the outside calls for schools, La Salle organized at Rheims, in 1685, what was probably the second normal school for training teachers in the world.[1] Another was organized later at Paris. In addition to a good education of the type of the time and thorough grounding in religion, the student teachers learned to teach in practice schools, under the direction of experienced teachers.

The pupils in La Salle's schools were graded into classes, and the class method of instruction was introduced.[2] The curriculum was unusually rich for a time when teaching methods and textbooks were but poorly developed, the needs for literary education small, and when children could not as yet be spared from work longer than the age of nine or ten. Children learned first to read, write, and spell French, and to do simple composition work in the vernacular. Those who mastered this easily were taught the Latin Psalter in addition. Much prominence was given to writing, the instruction being applied to the writing of bills, notes, receipts, and the like. Much free questioning was allowed in arithmetic and the Catechism, to insure perfect understanding of what was taught. Religious training was made the most prominent feature of the school, as was natural. A half-hour daily was given to the Catechism, mass was said daily, the crucifix was always on the wall, and two or three pupils were always to be found kneeling, telling their beads. The discipline, in contradistinction to the customary practice of the time, was mild, though all pun-

[1] Father Démia, at Lyons, had organized what was probably the first training-school for masters, in 1672. La Salle's training-school dates from 1684. Francke's German *Seminarium Præceptorum*, at Halle, the first in German lands, dates from 1696.

[2] The numerous pictures of schools and educational literature well into the nineteenth century show the general prevalence of the individual method of instruction. *It was the method* in American schools until well toward the middle of the nineteenth century. To have graded the children and introduced class instruction in 1684 was an important advance which the world has been slow in learning.



FIG. 104. A SCHOOL OF LA SALLE AT PARIS, 1688
A visit of James II and the Archbishop of Paris to the School
(From a bas-relief on the statue of La Salle, at Rouen)

ishments were carefully prescribed by rule.[1] The rule of silence in the school was rigidly enjoined, all speech was to be in a low tone of voice, and a code of signals replaced speech for many things.

Though the Order met with much opposition from both church and civil authorities, it made slow but steady headway. At the time of the death of La Salle, in 1719, thirty-five years after its foundation, the Order had one general normal school, four normal schools for training teachers, three practice schools, thirty-three primary schools, and one continuation school. The Order re-

[1] Everything was according to rule, even the ferule, which must be made of two strips of leather, ten to twelve inches long, sewed together. All offenses, and the number and location of the blows for each, were specified. Later the corporal punishment was replaced by penances.

mained largely French, and at the time of its suppression, in 1792, had schools in 121 communities in France and 6 elsewhere, about 1000 brothers, and approximately 30,000 children in its schools. This was approximately 1 child in every 175 of school age of the population of France at that time. While relatively small in numbers, their schools represented the best attempt to provide



FIG. 105. THE BROTHERS OF THE CHRISTIAN SCHOOLS BY 1792
Map, showing the locations of their communities

elementary education in any Catholic country before well into the nineteenth century. The distribution of their schools throughout France, by 1792, is shown on the map above. In 1803 the Order was reëstablished, by 1838 it had schools in 282 communities, and in 1887, when La Salle was declared a Saint of the Church, it had 1898 communities on four continents, 109 of which

were in the United States, and was teaching a total of approximately 300,000 primary children.

5. *General Results of the Reformation on Education*

Destruction and creation of schools. Any such general overturning of the established institutions and traditions of a thousand years as occurred at the time of the Protestant Revolts, with the accompanying bitter hatreds and religious strife, could not help but result in extensive destruction of established institutions. Monasteries, churches, and schools alike suffered, and it required time to replace them. Even though they had been neglectful of their functions, inadequate in number, and unsuited to the needs of a world fast becoming modern, they had nevertheless answered partially the need of the times. In all the countries where revolts took place these institutions suffered more or less, but in England probably most of all. The old schools which were not destroyed were transformed into Protestant schools, the grammar schools to train scholars and leaders, and the parish schools into Protestant elementary schools to teach reading and the Catechism, but the number of the latter, in all Protestant lands, was very far short of the number needed to carry out the Protestant religious theory. This, as we have seen, proposed to extend the elements of an education to large and entirely new classes of people who never before in the history of the world had had such advantages. Out of the Protestant religious conception that all should be educated the popular elementary school of modern times has been evolved. The evolution, though, was slow, and long periods of time have been required for its accomplishment.

In place of the schools destroyed, or the teachers driven out if no destruction took place, the reformers made an earnest effort to create new schools and supply teachers. This, though, required time, especially as there was as yet in the world no body of vernacular teachers, no institutions in which such could be trained, no theory as to education except the religious, no supply of educated men or women from which to draw, no theory of state support and control, and no source of taxation from which to derive a steady flow of funds. Throughout the long Middle Ages the Church had supplied gratuitous or nearly gratuitous instruction. This it could do, to the limited number whom it taught, from the proceeds of its age-old endowments and educational foundations. In the process of transformation from a Catholic

to a Protestant State, and especially during the more than a century of turmoil and religious strife which followed the rupture of the old relations, many of the old endowments were lost or were diverted from their original purposes. As the Protestant reformers were supported generally by the ruling princes, many of these tried to remedy the deficiency by ordering schools established. The landed nobility though, unused to providing education for their villein tenants and serfs,[1] were averse to supplying the deficiency by any form of general taxation. Nor were the rising merchant classes in the cities any more anxious to pay taxes to provide for artisans and servants what had for ages been a gratuity or not furnished at all.

No real demand for elementary schools. The creation of a largely new type of schools, and in sufficient numbers to meet the needs of large classes of people who before had never shared in the advantages of education, in consequence proved to be a work of centuries. The century of warfare which followed the reformation movement more or less exhausted all Europe, while the Thirty Years' War which formed its culmination left the German States, where the largest early educational progress had been made, a ruin. In consequence there was for long little money for school support, and religious interest and church tithes had to be depended on almost entirely for the establishment and support of schools. Out of the parish sextons or clerks a supply of vernacular teachers had to be evolved, a system of school organization and supervision worked out and added to the duties of the minister, and the feeling of need for education awakened sufficiently to make people willing to support schools. In consequence what Luther and Calvin declared at the beginning of the sixteenth century to be a necessity for the State and the common right of all, it took until well into the nineteenth century actually to create and make a reality.

The great demand of the time, too, was not so much for the education of the masses, however desirable or even necessary this might be from the standpoint of Protestant religious theory, but for the training of leaders for the new religious and social order which the Revival of Learning, the rise of modern nationalities, and the Reformation movements had brought into being. For this secondary schools for boys, largely Latin in type, were *demanded rather* than elementary vernacular schools for both sexes.

[1] See footnote 1, page 207.

We accordingly find the great creations of the period were secondary schools.

Lines of future development established. Still more, certain lines of future development now became clearly established. The drawing given here will help to make this evident. It will be seen from this that not only was the secondary school still the dominant type, though elementary schools began for the first

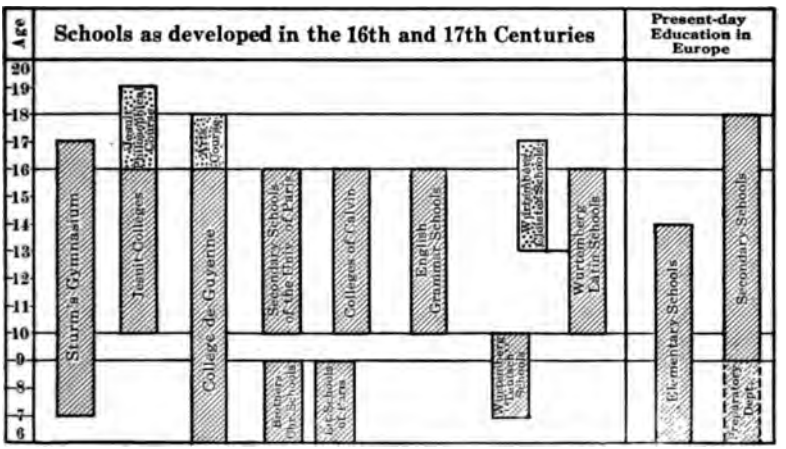


FIG. 106. TENDENCIES IN EDUCATIONAL DEVELOPMENT IN EUROPE, 1500 to 1700

time to be considered as important also, but that the secondary schools were wholly independent of the elementary schools which now began to be created. The elementary schools were in the vernacular and for the masses; the secondary schools were in the Latin tongue and for the training of the scholarly leaders. Between these two schools, so different in type and in clientèle, there was little in common. This difference was further emphasized with time. The elementary schools later on added subjects of use to the common people, while the secondary schools added subjects of use for scholarly preparation or for university entrance. The secondary schools also frequently provided preparatory schools for their particular classes of children. As a result, all through Europe two school systems — an elementary-school system for the masses, and a secondary-school system for the classes — exist to-day side by side. We in America did not develop such a class school system, though we started that way. This *was because the conception* of education we finally developed

was a product of a new democratic spirit, as will be explained later on.

QUESTIONS FOR DISCUSSION

1. Compare the attention to careful religious instruction in the secondary schools provided by the Lutherans, Calvinists, and English. What analogous instruction do we provide in the American high schools? Is it as thorough or as well done?
2. Compare the scope and ideals of the educational system provided by the Calvinists with the same for the Lutherans and Anglicans.
3. Compare the characteristics of Calvinistic (Huguenot) education, as summarized by Foster, with present-day state educational purposes.
4. Just what kind of a school system did Knox propose (1560) for Scotland?
5. Show how the educational program of the Jesuits reveals Ignatius Loyola as a man of vision.
6. Viewed from the purposes the Order had in mind, was it warranted in neglecting the education of the masses?
7. Does the success of the Order show the importance to society of finding and educating the future leader? Can all men be trained for leadership?
8. What does the statement that the Jesuits were "too practical to make many changes," but had "a keen eye for what was best" in the work of others, indicate as to the nature of school administration and educational progress?
9. Indicate the advantages which the Jesuits had in their teachers and teaching-aim over us of to-day. How could we develop an aim as clearly defined and potent as theirs? Could we select teachers with such care? How?
10. Compare the religious and educational propaganda of the Jesuits with the recent political propaganda of the Germans.
11. What is meant by the statement that the Jesuit teaching method, like that of the modern German *Volksschule*, was a teaching and not a questioning method?
12. Compare present American standards for teacher-training for elementary and secondary teaching with those required by the Jesuits: — (*a*) as to length of preparation; (*b*) as to nature and scope of preparation.
13. How do you explain the introduction of sewing into the elementary vernacular Catholic schools for girls, so long before handiwork for boys was thought of?
14. In schools so formally organized as those of La Salle, how do you explain the great freedom allowed in questioning on arithmetic and the Catechism?
15. Why should La Salle's work have been so opposed by both Church and civil authorities? Do you consider that his Order ever made what would be called rapid progress?
16. Why must the education of leaders always precede the education of the masses?
17. Explain how European countries came naturally to have two largely independent school systems — a secondary school for leaders and an elementary school for the masses — whereas we have only one continuous system.
18. *Explain why* modern state systems of education developed first in the *German States*, and why England and the Catholic nations of Europe *were so long in* developing state school systems.

SELECTED READINGS

In the accompanying *Book of Readings* the following selections are reproduced:

175. Woodward: Course of Study at the College of Geneva.
176. Synod of Dort: Scheme of Christian Education adopted.
177. Kilpatrick: Work of the Dutch in developing Schools.
178. Kilpatrick: Character of the Dutch Schools of 1650.
179. Statutes: The Scotch School Law of 1646.
180. Pachtler: The *Ratio Studiorum* of the Jesuits.
181. Gérard: The Dominant Religious Purpose in the Education of French Girls.
182. La Salle: Rules for the "Brothers of the Christian Schools."

QUESTIONS ON THE READINGS

1. Was the College at Geneva (**175**) a true humanistic-revival school?
2. Just what did the Synod of Dort provide for (**176**) in the matter of schools, school supervision, and ministerial duties?
3. Compare the work of the Dutch (**177**) and the Lutherans (**159–163**) in creating schools.
4. Just what type of school is indicated by selection **178**?
5. Just what did the Scotch law of 1646 provide for (**179**)?
6. Characterize the schools provided for by La Salle (**182**).
7. Compare the religious care at Port Royal (**181**) with that suggested by Saint Jerome (**R. 45**).

SUPPLEMENTARY REFERENCES

Baird, C. W. *History of the Rise of the Huguenots of France.*
Baird, C. W. *Huguenot Emigration to America.*
Grant, Jas. *History of the Burgh Schools of Scotland.*
Hughes, Thos. *Loyola, and the Educational System of the Jesuits.*
Kilpatrick, Wm. H. *The Dutch Schools of New Netherlands and Colonial New York.*
Laurie, S. S. *History of Educational Opinion since the Renaissance.*
Ravelet, A. *Blessed J. B. de la Salle.*
Schwickerath, R. *Jesuit Education; its History and Principles in the Light of Modern Educational Problems.*
Woodward, W. H. *Education during the Renaissance.*

CHAPTER XV

EDUCATIONAL RESULTS OF THE PROTESTANT REVOLTS

III. THE REFORMATION AND AMERICAN EDUCATION

The Protestant settlement of America. Columbus had discovered the new world just twenty-five years before Luther nailed his theses to the church door at Wittenberg, and by the time the northern continent had been roughly explored and was ready for settlement, Europe was in the midst of a century of warfare in a vain attempt to extirpate the Protestant heresy. By the time that the futility of fire and sword as means for religious conversion had finally dawned upon Christian Europe and found expression in the Peace of Westphalia (1648), which closed the terrible Thirty Years' War (p. 301), the first permanent settlements in a number of the American colonies had been made. These settlements, and the beginnings of education in America, are so closely tied up with the Protestant Revolts in Europe that a chapter on the beginnings of American education belongs here as still another phase of the educational results of the Protestant Revolts.

Practically all the early settlers in America came from among the peoples and from those lands which had embraced some form of the Protestant faith, and many of them came to America to found new homes and establish their churches in the wilderness, because here they could enjoy a religious freedom impossible in their old home-lands. This was especially true of the French Huguenots, many of whom, after the revocation of the Edict of Nantes [1] (1685), fled to America and settled along the coast of the Carolinas; the Calvinistic Dutch and Walloons, who settled in and about New Amsterdam; the Scotch and Scotch-Irish

[1] Representing not over one tenth of the population, the Protestants in France had from the first been subjected to much persecution. In the Massacre of Saint Bartholomew (1572) over one thousand had been massacred in Paris and ten thousand more in the provinces. After some warfare, a treaty was made, in 1598, under which the so-called "Edict of Nantes" guaranteed religious toleration for the Protestants. In 1685 this was revoked, and their ministers were given fifteen days to leave France. The members were, however, forbidden to leave. Many, though, got away, escaping to the Low Countries, England, and to America.

Presbyterians, who settled in New Jersey, and later extended along the Allegheny Mountain ridges into all the southern colonies; the English Quakers about Philadelphia, who came under the leadership of William Penn, and a few English Baptists and Methodists in eastern Pennsylvania; the Swedish Lutherans, along the Delaware; the German Lutherans, Moravians, Mennonites, Dunkers, and Reformed-Church Germans, who settled in large numbers in the mountain valleys of Pennsylvania: and the Calvinistic dissenters from the English National Church, known as Puritans, who settled the New England colonies, and who, more than any others, gave direction to the future development of education in the American States. Very many of these early religious groups came to America in little congregations, bringing their ministers with them. Each set up, in the colony in which it settled, what were virtually little religious republics, that through them they might the better perpetuate the religious principles for which they had left the land of their birth. Education of the young for membership in the Church, and the perpetuation of a learned ministry for the congregations, from the first elicited the serious attention of these pioneer settlers.

Englishmen who were adherents of the English national faith (Anglicans) also settled in Virginia and the other southern colonies, and later in New York and New Jersey, while Maryland was founded as the only Catholic colony, in what is now the United States, by a group of persecuted English Catholics who obtained a charter from Charles I, in 1632. These settlements are shown on the map on the following page. As a result of these settlements there was laid, during the early colonial period of American history, the foundation of those type attitudes toward education which subsequently so materially shaped the educational development of the different American States during the early part of our national history.

The Puritans in New England. Of all those who came to America during this early period, the Calvinistic Puritans who settled the New England colonies contributed most that was valuable to the future educational development of America, and because of this will be considered first.

The original reformation in England, as was stated in chapters XII and XIII, had been much more nominal than real. The English Bible and the English Prayer-Book had been issued to the churches *(R. 170), and* the King instead of the Pope had been

declared by the Act of Supremacy (**R. 153**) to be the head of the English National Church. The same priests, though, had continued in the churches under the new régime, and the church service had not greatly changed aside from its transformation from



FIG. 107. MAP SHOWING THE RELIGIOUS SETTLEMENTS IN AMERICA

Latin into English. Neither the Church as an organization nor its members experienced any great religious reformation. Not all Englishmen, though, took the change in allegiance so lightly (**R. 183**), and in consequence there came to be a gradually increasing number who desired a more fundamental reform of the *English Church*. By 1600 the demand for Church reform had

become very insistent, and the question of Church purification (whence the name "Puritans") had become a burning question in England.

The English Puritans, moreover, were of two classes. One was a moderate but influential "low-church" group within the "high" State Church, possessed of no desire to separate Church and State, but earnestly insistent on a simplification of the Church ceremonial, the elimination of a number of the vestiges of the old Romish-Church ritual, and particularly the introduction of more preaching into the service. The other class constituted a much more radical group, and had become deeply imbued with Calvinistic thinking. This group gradually came into open opposition to any State Church, stood for the local independence of the different churches or congregations, and desired the complete elimination of all vestiges of the Romish faith from the church services.[1] They became known as Independents, or Separatists, and formed the germs of the later Congregational groups of early New England. Both Elizabeth (1558–1603) and James I (1603–25) savagely persecuted this more radical group, and many of their congregations were forced to flee from England to obtain personal safety and to enjoy religious liberty (**R.** 184). One of these fugitive congregations, from Scrooby, in north-central England, after living for several years at Leyden, in Holland, finally set sail for America, landed on Plymouth Rock, in 1620, and began the settlement of that "bleak and stormy coast." Other congregations soon followed, it having been estimated that twenty thousand English Puritans migrated [2] to



FIG. 108. HOMES OF THE PILGRIMS, AND THEIR ROUTE TO AMERICA

[1] The culmination of this dissatisfaction came in 1649, when Charles I was beheaded and "The Commonwealth" was established under Cromwell. During the troubled times which followed (1649–60) much damage was done to the churches of England by way of eliminating vestiges of "popery."

[2] Some of these went back to England — many after the establishment of the Protestant *Commonwealth* under Cromwell (1649). It has been estimated, for

the New England wilderness before 1640. These represented a fairly well-to-do type of middle-class Englishmen, practically all of whom had had good educational advantages at home.

Settling along the coast in little groups or congregations, they at once set up a combined civil and religious form of government, modeled in a way after Calvin's City-State at Geneva, and which became known as a New England town.[1] In time the southern portion of the coast of New England was dotted with little self-governing settlements of those who had come to America to obtain for themselves that religious freedom which had been denied them at home. These settlements were loosely bound together in a colony federation, in which each town was represented in a General Court, or legislature. The extent of these settlements by 1660 is shown on the map on the opposite page.

Beginnings of schools in New England. Having come to America to secure religious freedom, it was but natural that the perpetuation of their particular faith by means of education should have been one of the first matters to engage their attention, after the building of their homes and the setting up of the civil government (**R. 185**). Being deeply imbued with Calvinistic ideas as to government and religion, they desired to found here a religious commonwealth, somewhat after the model of Geneva (p. 298), or Scotland (p. 335), or the Dutch provinces (p. 334), the corner-stones of which should be religion and education.

At first, English precedents were followed. Home instruction, which was quite common in England among the Puritans, was naturally much employed to teach the children to read the Bible and to train them to participate in both the family and the congregational worship. After 1647, town elementary schools under a master, and later the English "dame schools" (chapter XVIII), were established to provide this rudimentary instruction. The English apprentice system was also established (**R. 201**), and the masters of apprentices gave similar instruction to boys entrusted

three of the early colonies, that the population by decades was approximately as follows:

	1630	*1640*	*1650*	*1660*
New Netherlands	500	1000	3000	6000
Massachusetts	1300	14000	18000	25000
Virginia	3000	8000	17000	33000

[1] The name and the form came alike from old England, where an irregular area known as a "town" or a "township," constituted the unit of representation in the *shire*moats and the membership of the church parish. Almost every town and parish officer known in England was created by the new towns in New England, with practically the same functions as in the old home.

to their care. The town religious governments, under which all the little congregations organized themselves, much as the little religious parishes had been organized in old England, also began the voluntary establishment of town grammar schools, as a few towns in England had done (R. 143) before the Puritans migrated. The "Latin School" at Boston dates from 1635, and has had a continuous existence since that time. The grammar school at



Fig. 109. New England Settlements, 1660

Charlestown dates from 1636, that at Ipswich from the same year, and the school at Salem from 1637. In 1639 Dorchester voted:

that there shall be a rent of 20 lb a year for ever imposed vpon Tomsons Island . . . toward the mayntenance of a schoole in Dorchester. This rent of 20 lb yearly to bee payd to such a schoole-master as shall vndertake to teach english, latine, and other tongues, and also writing. The said schoole-master to bee chosen from tyme to tyme pr the freemen.

Newbury, in 1639, voted "foure akers of upland" and "sixe akers of salt marsh" to Anthony Somerby "for his encouragement to keepe schoole for one yeare," and later levied a town rate of £24 for a "schoole to be kepte at the meeting house." Cambridge also early established a Latin grammar school "for the training up of Young Schollars, and fitting them[1] for *Academicall Learning*" (R. 185).



FIG. 110. THE BOSTON LATIN GRAMMAR SCHOOL

The original school, on School Street, with King's Chapel on the left

The support for the town schools thus founded was derived from various sources, such as the levying of tuition fees, the income from town lands or fisheries set aside for the purpose,[2] voluntary contributions from the people of the town,[3] a town tax, or a combination of two or more of these methods. The founding of the "free (grammar) school" at Roxburie, in 1645, is representative (R. 188) of the early methods. There was no uniform plan as yet, in either old or New England.

[1] "The settlers were in the first freshness of their Utopian enthusiasm, and their church establishment was the very heart of their enterprise. It became therefore a matter of primary importance to educate preachers. For ages preparation for the ministry had consisted mainly in acquiring a knowledge of Latin, the sacred tongue of western Christendom. Though the Latin service was no longer used by Protestants, and the Vulgate Bible had been dethroned by the original text, and though the main stream of English theology was by this time flowing in the channel of the mother tongue, the notion that all ministers should know Latin had still some centuries of tough life in it." (Eggleston, E., *The Transit of Civilization*, p. 225.)

[2] For example, the town of Boston, in 1641, devoted the income from Deere Island to the support of schools, and Plymouth, in 1670, appropriated the income from the Cape Cod fishing industry to the support of grammar schools (R. 194 c). These are among the earliest of the permanent endowments for education in America.

[3] *See The Development of School Support in Colonial Massachusetts*, by George L. *Jackson, for a careful study of the different early methods of school support.*

Founding of Harvard College. In addition to establishing Latin grammar schools, a college was founded, in 1636, by the General Court (legislature) of the Massachusetts Bay Colony, to perpetuate learning and insure an educated ministry (**R. 185**) to the churches after "our present ministers shall lie in the dust." This new college, located at Newtowne, was modeled after Emmanuel College at Cambridge, an English Puritan college in which many of the early New England colonists had studied,[1] and in loving memory of which they rechristened Newtowne as Cambridge. In 1639 the college was christened Harvard College, after a graduate of Emmanuel College, Cambridge, by the name of John Harvard, who died in Charlestown, a year after his arrival in the colony, and who left the college his library of two hundred and sixty volumes and half his property, about £850.

The instruction in the new college was a combination of the arts and theological instruction given in a mediæval university, though at Harvard the President, Master Dunster (**R. 185**), did all the teaching. For the first fifty years at Harvard this continued to be true, the attendance during that time seldom exceeding twenty. The entrance requirements for the college (**R. 186 a**) call for the completion of a typical English Latin grammar-school education; the rules and precepts for the government of the college (**R. 186 b**) reveal the deep religious motive; and the schedule of studies (**R. 186 c**) and the requirements for degrees (**R. 186 d**) both show that the instruction was true to the European type. In the charter for the college, granted by the colonial legislature in 1650 (**R. 187 a**), we find exemptions and conditions which remind one strongly of the older European foundations. A century later Brown College, in Rhode Island, was granted even more extensive exemptions (**R. 187 b**).

The first colonial legislation: the Law of 1642. We thus see manifested early in New England the deep Puritan-Calvinistic zeal for learning as a bulwark of Church and State. We also see the establishment in the wilderness of New England of a typical English educational system — that is, private instruction in reading and religion by the parents in the home and by the masters of apprentices, and later by a town schoolmaster; the Latin grammar

[1] The Puritan emigrants to New England represented a sturdy and well-educated class of English country squires and yeomen. They came of thrifty and well-to-do stock, the shiftless and incompetent not being represented. All had had good educational advantages, and many were graduates of Cambridge University. It has been asserted that probably never since has the proportion of college men in the community been so large.

school in the larger towns, to prepare boys for the college of the colony; and an English-type college to prepare them for the ministry. As in England, too, all was clearly subordinate to the Church. Still further, as in England also, the system was voluntary, the deep religious interest which had brought the congregations to America being depended upon to insure for all the necessary education and religious training.

It early became evident, though, that these voluntary efforts on the part of the people and the towns would not be sufficient to insure that general education which was required by the Puritan religious theory. Under the hard pioneer conditions, and the suffering which ensued, many parents and masters of apprentices evidently proved neglectful of their educational duties. Accordingly the Church appealed to its servant, the State, as represented in the colonial legislature (General Court) to assist it in compelling parents and masters to observe their religious obligations. The result was the famous Massachusetts Law of 1642 (**R. 190**), which directed "the chosen men" (Selectmen; Councilmen) of each town to ascertain, from time to time, if the parents and masters were attending to their educational duties; if the children were being trained "in learning and labor and other employments . . . profitable to the Commonwealth"; and if children were being taught "to read and understand the principles of religion and the capital laws of the country," and empowered them to impose fines on "those who refuse to render such accounts to them when required." In 1645 the General Court further ordered that all youth between ten and sixteen years of age should also receive instruction "in ye exercise of arms, as small guns, halfe pikes, bowes & arrows, &c."

The Law of 1642 is remarkable in that, for the first time in the English-speaking world, a legislative body representing the State ordered that all children should be taught to read. The law shows clearly not only the influence of the Reformation theory as to personal salvation and the Calvinistic conception of the connection between learning and religion, but also the influence of the English Poor-Law legislation which had developed rapidly during the half-century immediately preceding the coming of the Puritans to America (**R. 173**). On the foundations of the English Poor Law of 1601 (**R. 174**) our New England settlers moulded *the first American* law relating to education, adding to the *principles there* established (p. 326) a distinct Calvinistic contri-



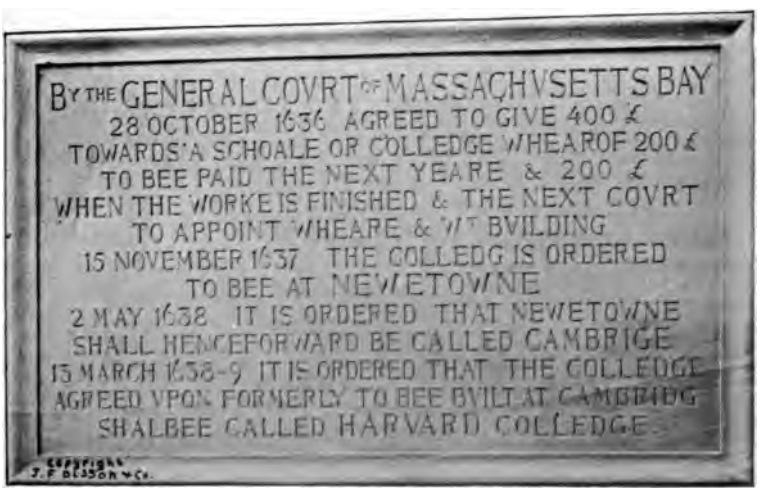


PLATE 9. TWO TABLETS ON THE WEST GATEWAY AT HARVARD UNIVERSITY
Reproducing colonial records relating to the founding of Harvard College



bution to our new-world life that, the authorities of the civil town should see that all children were taught "to read and understand the principles of religion and the capital laws of the country." This law the Selectmen, or the courts if they failed to do so, were ordered to enforce, and the courts usually looked after their duties in the matter (**R. 192**).

The Law of 1647. The Law of 1642, while ordering "the chosen men" of each town to see that the education and training of children was not neglected, and providing for fines on parents and masters who failed to render accounts when required, did not, however, establish schools, or direct the employment of schoolmasters. The provision of education, after the English fashion, was still left with the homes. After a trial of five years, the results of which were not satisfactory, the General Court enacted another law by means of which it has been asserted that "the Puritan government of Massachusetts rendered probably its greatest service to the future."

After recounting in a preamble (**R. 191**) that it had in the past been "one cheife piect of y^{t} ould deluder, Satan, to keepe men from the knowledge of y^{e} Scriptures, . . . by keeping y^{m} in an unknowne tongue," so now "by pswading from y^{e} use of tongues," and "obscuring y^{e} true sence & meaning of y^{e} originall" by "false glosses of saint-seeming deceivers," learning was in danger of being "buried in y^{e} grave of o^{r} fath^{rs} in y^{e} church and comonwealth"; the Court ordered:

1. That every town having fifty householders should at once appoint a teacher of reading and writing, and provide for his wages in such manner as the town might determine; and
2. That every town having one hundred householders must provide a grammar school to fit youths foi the university, under a penalty of £5 (afterwards increased to £20) for failure to do so.

This law represents a distinct step in advance over the Law of 1642, and for this there are no English precedents. It was not until the latter part of the nineteenth century that England took such a step. The precedents for the compulsory establishment of schools lie rather in the practices of the different German States (p. 318), the actions of the Dutch synods (**R. 176**) and provinces (p. 335), the Acts of the Scottish parliament of 1633 and 1646 (p. 334; **R. 179**), and the general Calvinistic principle that education was an important function of a religious State.

Principles established. The State here, acting again as the

servant of the Church, enacted a law and fixed a tradition which prevailed and grew in strength and effectiveness after State and Church had parted company. Not only was a school system ordered established — elementary for all towns and children, and secondary for youths in the larger towns — but, for the first time among English-speaking people, there was an assertion of the right of the State to require communities to establish and maintain schools, under penalty if they refused to do so. It can be safely asserted, in the light of later developments, that the two laws of 1642 and 1647 represent the foundations upon which our American state public-school systems have been built. Mr. Martin, the historian of the Massachusetts public-school system, states the fundamental principles which underlay this legislation, as follows:[1]

1. The universal education of youth is essential to the well-being of the State.
2. The obligation to furnish this education rests primarily upon the parent.
3. The State has a right to enforce this obligation.
4. The State may fix a standard which shall determine the kind of education, and the minimum amount.
5. Public money, raised by general tax, may be used to provide such education as the State requires. The tax may be general, though the school attendance is not.
6. Education higher than the rudiments may be supplied by the State. Opportunity must be provided, at public expense, for youths who wish to be fitted for the university.

"It is important to note here," adds Mr. Martin. "that the idea underlying all this legislation is neither paternalistic nor socialistic. The child is to be educated, not to advance his personal interests, but because the State will suffer if he is not educated. The State does not provide schools to relieve the parent, nor because it can educate better than the parent can, but because it can thereby better enforce the obligation which it imposes." To prevent a return to the former state of religious ignorance it was important that education be provided. To assure this the colonial legislature enacted a law requiring the maintenance and support of schools by the towns. This law became the corner-stone of our American state school systems.

Influence on other New England colonies. Connecticut Colony, in its Law of 1650 establishing a school system, combined the

[1] *Martin, Geo. H., The Evolution of the Massachusetts Public-School System*, pp. 14–16.

spirit of the Massachusetts Law of 1642, though stated in different words (**R. 193**), and the Law of 1647, stated word for word. New Haven Colony, in 1655, ordered that children and apprentices should be taught to read, as had been done in Massachusetts, in 1642, but on the union of New Haven and Connecticut Colonies, in 1665, the Connecticut Code became the law for the united colonies. In 1702 a college was founded (Yale) and finally located at New Haven, to offer preparation for the ministry in the Connecticut colony, as had been done earlier in Massachusetts, and Latin grammar schools were founded in the Connecticut towns to prepare for the new college, as also had been done earlier in Massachusetts. The rules and regulations for the grammar school at New Haven (**R. 189**) reveal the purpose and describe the instruction provided in one of the earliest and best of these.

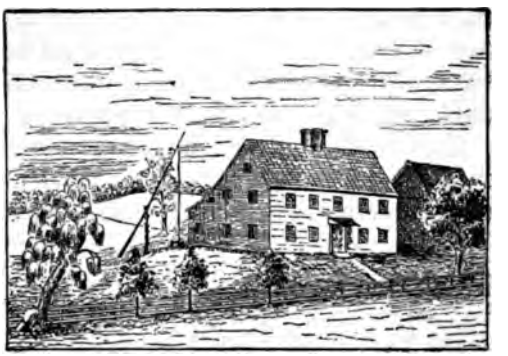


FIG. 111. WHERE YALE COLLEGE WAS FOUNDED
The home of the Reverend Samuel Russell, at Branford, Conn. The first meeting to organize the college was held there, in September, 1701

Plymouth Colony, in 1658 and again in 1663, proposed to the towns that they "sett vp" a schoolmaster "to traine vp children to reading and writing" (**R. 194 a**). In 1672 the towns were asked to aid Harvard College by gifts (**R. 194 b**). In 1673–74 the income from the Cape Cod fisheries was set aside for the support of a (grammar) school (**R. 194 c**). Finally, in 1677, all towns having over fifty families and maintaining a grammar school were ordered aided from the fishery proceeds (**R. 194 d**).

The Massachusetts laws also applied to Maine, New Hampshire, and Vermont, as these were then a part of Massachusetts Colony. After New Hampshire separated, in 1680, the Massachusetts Law of 1647 was virtually readopted in 1719–21. In Maine and Vermont there were so few settlers, until near the beginning of our national life, that the influence of the Massachusetts legislation on these States was negligible until a later *period.*

Only in Rhode Island and Providence Plantations, of all the New England colonies, did the Massachusetts legislation fail to exert a deep influence. Settled as these two had been by refugees from New England, and organized on a basis of hospitality to all who suffered from religious oppression elsewhere, the religious stimulus to the founding of schools naturally was lacking. As the religious basis for education was as yet the only basis, the first development of schools in Rhode Island awaited the humanitarian and economic influences which did not become operative until early in the nineteenth century.

Outside of the New England colonies, the appeal to the State as the servant of the Church was seldom made during the early colonial period, the churches handling the educational problem in their own way. As a result the beginnings of State oversight and control were left to New England. In the central colonies a series of parochial-school systems came to prevail, while in Episcopalian Virginia and the other colonies to the south the no-business-of-the-State attitude assumed toward education by the mother country was copied.

The church schools of New York. New Netherland, as New York Colony was called before the English occupation, was settled by the Dutch West India Company, and some dozen villages about New York and up the Hudson had been founded by the time it passed to the control of the English, in 1664. In these the Dutch established typical home-land public parochial schools, under the control of the Reformed Dutch Church. The schoolmaster was usually the reader and precentor in the church as well (**R. 195**), and often acted, as in Holland, as sexton besides. Girls attended on equal terms with boys, but sat apart and recited in separate classes. The instruction consisted of reading and writing Dutch, sometimes a little arithmetic, the Dutch Catechism, the reading of a few religious books, and certain prayers. The rules (1661) for a schoolmaster in New Amsterdam (**R. 196**), and the contract with a Dutch schoolmaster in Flatbush (**R. 195**), dating from 1682, reveal the type of schools and school conditions provided. All except the children of the poor paid fees to the schoolmaster.[1]

[1] The charging of a tuition fee to those who could afford to pay was a common European practice of the time, nevertheless the public authorities — at that time a mixture of civil and church officials — provided the school, employed and licensed the teacher, determined the textbooks to be used, and laid down the conditions under which the school should be conducted. The schoolmaster assisted the church by participating in the Sunday services. The elementary school of the Dutch, which was copied in the New Netherland, was thus a combination of a public and parochial, and a free and pay school.

He was licensed by the Dutch church authorities. As the Dutch had not come to America because of persecution, and were in no way out of sympathy with religious conditions in the home-land, the schools they developed here were typical of the Dutch European parochial schools of the time (**R.** 178). A *trivial* (Latin) school was also established in New York, in 1652.

After the English occupation the English principle of private and church control of education, with schooling on a tuition or a charitable basis, came to prevail, and this continued up to the beginning of our national period.[1] Of the English colonial schools of New York Draper has written:[2]

All the English schools in the province from 1700 down to the time of the Declaration of Independence were maintained by a great religious society organized under the auspices of the Church of England — and, of course, with the favor of the government — called "The Society for the Propagation of the Gospel in Foreign Parts." The law governing this Society provided that no teacher should be employed until he had proved "his affection for the present government" and his "conformity to the doctrine and discipline of the Church of England." Schools maintained under such auspices were in no sense free schools. Indeed, humiliating as it is, no student of history can fail to discern the fact that the government of Great Britain, during its supremacy in this territory, did nothing to facilitate the extension or promote the efficiency of free elementary schools among the people.

The parochial schools of Pennsylvania. Pennsylvania was settled by Quakers, Baptists, Methodists, Presbyterians, German Lutherans, Moravians, Mennonites, and members of the German Reformed Church, all of whom came to America to secure greater religious liberty and had been attracted to this colony by the freedom of religious worship which Penn had provided for there. All these were Protestant sects, all believed in the necessity of learning to read the Bible as a means to personal salvation, and all made efforts looking toward the establishment of schools as a part of their church organization. Unlike New England, though, no sect was in a majority; church control for each denomination was considered as most satisfactory; and no appeal was made to the State to have it assist the churches in the enforcement of their religious purposes. The clergymen were usually the teachers in the parochial schools established,[3] while private pay schools were

[1] This was, of course, much more true of New York City and Island than of the outlying Dutch villages. In these latter a public school was for long maintained.

[2] Draper, A. S., *Origin and Development of the New York Common School System.*

[3] Among the German Lutherans, who constituted nearly one fourth of the total population of the colony, a school is claimed to have been established alongside the

opened in the villages and towns. These were taught in English, German, or the Moravian tongue (Czech), according to the original language of the different immigrants. The Quakers seem to have taken particular interest in schools (**R. 199**), a Quaker school in Philadelphia (**R. 198**) having been established the year the city was founded. Girls were educated as well as boys, and the emphasis was placed on reading, writing, counting, and religion, rather than upon any higher form of training.



FIG. 112. AN OLD QUAKER MEETING-HOUSE AND SCHOOL AT LAMPETER, PENNSYLVANIA
(From an old drawing)

The result was the development in this colony of a policy of depending on church and private effort, and the provision of education, aside from certain rudimentary and religious instruction, was left largely for those who could afford to pay for the privilege. Charitable education was extended to but a few, for a short time, while, under the freedom allowed, many communities made but indifferent provisions or suffered their schools to lapse. Under the primitive conditions of the time the interest even in religious education often declined almost to the vanishing point. So lax in the matter of providing schooling had many communities become that the second Provincial Assembly, sitting in Philadelphia, in 1683, passed an ordinance requiring (**R. 197**) that all persons having children must cause them to be taught to read and write, so that they might be able to read the Scriptures by the time they were twelve years old, and also that all children be taught some useful trade. A fine of £5 was to be assessed for failure to comply with the law. So much in advance of English ideas as to what was fitting and proper was this compulsory law that it was vetoed by William and Mary, when submitted to their

church by each of the congregations "at the earliest possible period after its formation." The close connection between these Lutheran congregations and their schools may be seen from the following contract, dated at Lancaster, in 1774:

"I, the undersigned, John Hoffman, parochial teacher of the church at Lancaster, have promised in the presence of the congregation, to serve as choirister, and, as long as we have no pastor, to read sermons on Sunday. In summer I promise to *hold cathechetical instruction* with the young, as becomes a faithful teacher, and *also to lead them in the* singing and attend to the clock."

majesties for approval. Ten years later it was reënacted by the Governor and Assembly of the colony, but proved so difficult of enforcement that it was soon dropped, and the chance of starting education in Pennsylvania somewhat after the New England model was lost. The colony now settled down to a policy of non-state action, and this in time became so firmly established that the do-as-you-please idea persisted in this State up to the establishment of the first free state school system, in 1834.

Mixed conditions in New Jersey. In New Jersey, situated as it was near the center of the different colonies, the early development of education there was the product of a number of different influences. The Dutch crossed from New Amsterdam, the English came from Connecticut and later from New York, Scotch and Scotch-Irish Presbyterians came from the mother country, Swedish Lutherans settled along the Delaware, and Quakers and German Lutherans came over from Pennsylvania. The educational practice of the colony or land from which each group of settlers came was reproduced in the colony. After the English succeeded the Dutch in New Amsterdam (1664), English methods and practice in education gradually came into control throughout most of New Jersey, and as a result here, as in New York, but little was accomplished in providing schools for other than a select few until well after the beginning of the nineteenth century. Neither New Jersey, New York, nor Pennsylvania may be said to have developed any colonial educational policy aside from that of allowing private and parochial effort to provide such schools as seemed desirable.

Virginia and the southern type. Almost all the conditions attending the settlement of Virginia were in contrast to those of the New England colonies. The early settlers were from the same class of English yeomen and country squires, but with the important difference that whereas the New England settlers were Dissenters from the Church of England and had come to America to obtain freedom in religious worship, the settlers in Virginia were adherents of the National Church and had come to America for gain. The marked differences in climate and possible crops led to the large plantation type of settlement, instead of the compact little New England town; the introduction of large numbers of "indentured white servants," and later negro slaves, led to the development of classes in society instead of to the New England *type of democracy;* and the lack of a strong religious motive for

education naturally led to the adoption of the customary English practices instead of to the development of colonial schools. The tutor in the home, education in small private pay schools, or education in the mother country were the prevailing methods adopted among the well-to-do planters, while the poorer classes were left with only such advantages as apprenticeship training or charity schools might provide. Throughout the entire colonial period Virginia remained most like the mother country in spirit and practice, and stands among the colonies as the clearest example of the English attitude toward school support and control. As in the mother country, education was considered to be no business of the State. Rhode Island, New York, New Jersey, Delaware, and the Carolinas followed the English attitude, much after the fashion of Virginia.

Practically all the Virginia colonial legislation relating to education refers either to William and Mary College (founded in 1693), or to the education of orphans and the children of the poor. Both these interests, as we have previously seen, were typically English. All the seventeenth-century legislation relating to education is based on the English Poor-Law legislation,[1] previously described (p. 325), and included the compulsory apprenticeship of the children of the poor, training in a trade, the requirement that the public authorities must provide opportunities for this type of education, and the use of both local and colony funds for the purpose (**R. 200 a**), all, as the Statutes state, "according to the aforesaid laudable custom in the Kingdom of England." It was not until 1705 that Virginia reached the point, reached by Massachusetts in 1642, of requiring that "the master of the [apprenticed] orphan shall be obliged to teach him to read and write." In all the Anglican colonies the apprenticing of the children of the poor (see **R. 200 b** for some interesting North Carolina records) was a characteristic feature. During the entire colonial period the indifference of the mother country to general education was steadily reflected in Virginia and in the colonies which were essentially Anglican in religion, and followed the English example.

[1] The seventeenth-century Virginia legislation relating to education is as follows:
1643. Orphans to be educated "according to the competence of their estate."
1646. "If the estate be so meane and inconsiderate that it will not reach to a free education, then that orphan [shall] be bound to some manuall trade . . . except some friends or relatives be willing to keep them."
1660–61. "To avoid sloth and idleness . . . as also for the relief of parents whose *poverty extends* not to giving [their children] breeding, the justices of the *peace should* . . . bind out children to tradesmen or husbandmen to be *brought up in* some good and lawful calling."

Type plans represented by 1750. The seventeenth century thus witnessed the transplanting of European ideas as to government, religion, and education to the new American colonies, and by the eighteenth century we find three clearly marked types of educational practice or conception as to educational responsibility established on American soil.

The first was the strong Calvinistic conception of a religious State, supporting a system of common vernacular schools, higher Latin schools, and a college, for both religious and civic ends. This type dominated New England, and is best represented by Massachusetts. From New England this attitude was carried westward by the migrations of New England people, and deeply influenced the educational development of all States to which the New Englander went in any large numbers. This was the educational contribution of Calvinism to America.[1] Out of it our state school systems of to-day, by the separation of Church and State, have been evolved.

The second was the parochial-school conception of the Dutch, Moravians, Mennonites, German Lutherans, German Reformed Church, Quakers, Presbyterians, Baptists, and Catholics. This type is best represented by Protestant Pennsylvania and Catholic Maryland. It stood for church control of all educational efforts, resented state interference, was dominated only by church purposes, and in time came to be a serious obstacle in the way of rational state school organization and control.

The third type, into which the second type tended to fuse, conceived of public education, aside from collegiate education, as intended chiefly for orphans and the children of the poor, and as a charity which the State was under little or no obligation to assist in supporting. All children of the upper and middle classes in society attended private or church schools, or were taught by tutors in their homes, and for such instruction paid a proper tuition fee. Paupers and orphans, in limited numbers and for a limited time, might be provided with some form of useful education at the expense of either Church or State. This type is best represented by Anglican Virginia, which typified well the *laissez-*

[1] "Perhaps the most remarkable, because the most widespread and complex illustration of the educational genius of Calvinism is to be found in the American colonies, where the various European streams of Calvinism so converged that the seventeenth-century colonists were predominantly Calvinists — not merely the Puritans of New England, but the Dutch, Walloons, Huguenots, Scotch, and Scotch-Irish, with a considerable Puritan admixture in Anglican Virginia and Catholic Maryland." (Foster, H. D., *in Monroe's Cyclopedia of Education*, vol. 1, p. 498.)

faire policy which dominated England from the time of the Protestant Reformation until the latter half of the nineteenth century.

These three types of attitude toward the provision of education became fixed American types, and each deeply influenced subsequent American educational development, as we shall point out in a later chapter.

Dominance of the religious motive. The seventeenth century was essentially a period of the transplanting, almost unchanged in form, of the characteristic European institutions, manners, religious attitudes, and forms of government to American shores. Each sect or nationality on arriving set up in the new land the characteristic forms of church and school and social observances known in the old home-land. Dutch, Germans, English, Scotch, Calvinists, Lutherans, Anglicans, Presbyterians — reproduced in the American colonies the main type of schools existing at the time of their migration in the mother land from which they came. They were also dominated by the same deep religious purpose.

The dominance of this religious purpose in all instruction is well illustrated by the great beginning-school book of the time, *The New England Primer*. A digest of the contents of this, with a few pages reproduced, is given in **R. 202.** This book, from which all children learned to read, was used by Dissenters and Lutherans alike in the American colonies. This book Ford well characterizes in the following words:

> As one glances over what may truly be called "The Little Bible of New England," and reads its stern lessons, the Puritan mood is caught with absolute faithfulness. Here was no easy road to knowledge and salvation; but with prose as bare of beauty as the whitewash of their churches, with poetry as rough and stern as their storm-torn coast, with pictures as crude and unfinished as their own glacial-smoothed boulders, between stiff oak covers which symbolized the contents, the children were tutored, until, from being unregenerate, and as Jonathan Edwards said, "young vipers, and infinitely more hateful than vipers" to God, they attained that happy state when, as expressed by Judge Sewell's child, they were afraid that they "should goe to hell," and were "stirred up dreadfully to seek God." God was made sterner and more cruel than any living judge, that all might be brought to realize how slight a chance even the least erring had of escaping eternal damnation.

One learned to read chiefly that one might be able to read the *Catechism* and the Bible, and to know the will of the Heavenly *Father.* There was scarcely any other purpose in the mainte-

nance of elementary schools. In the grammar schools and the colleges students were "instructed to consider well the main end of life and studies." These institutions existed mainly to insure a supply of learned ministers for service in Church and State. Such studies as history, geography, science, music, drawing, secular literature, and organized play were unknown. Children were constantly surrounded, week days and Sundays, by the somber Calvinistic religious atmosphere in New England,[1] and by the careful religious oversight of the pastors and elders in the colonies where the parochial-school system was the ruling plan for education. Schoolmasters were required to "catechise their scholars in the principles of the Christian religion," and it was made "a chief part of the schoolmaster's religious care to commend his scholars and his labors amongst them unto God by prayer morning and evening, taking care that his scholars do reverently attend during the same." Religious matter constituted the only reading matter, outside the instruction in Latin in the grammar schools. The Catechism was taught, and the Bible was read and expounded. Church attendance was required, and grammar-school pupils were obliged to report each week on the Sunday sermon. This insistence on the religious element was more prominent in Calvinistic New England than in the colonies to the south, but everywhere the religious purpose was dominant. The church parochial and charity schools were essentially schools for instilling the church practices and beliefs of the church maintaining them. This state of affairs continued until well toward the beginning of the nineteenth century.

QUESTIONS FOR DISCUSSION

1. Compare the conservative and radical groups in the English purification movement with the conservative and radical groups, as typified by Erasmus and Luther, at the time of the Reformation.
2. Show how, for each group, the schools established were merely homeland foreign-type religious schools, with nothing distinctively American about them.

[1] "To illustrate how omnipresent this religious atmosphere was, I cannot do better than to cite the occasion when Judge Sewell found that the spout which conducted the rain water from his roof did not perform its office. After patient searching, a ball belonging to the small children was found lodged in the spout. Thereupon the father sent for the minister and had a season of prayer with his boys that their mischief or carelessness might be set in its proper aspect and that the event might be sanctified to their spiritual good. Powers of darkness and of light were struggling for the possession of every soul, and it was the duty of parents, ministers, and teachers to lose no opportunity to pluck the children as brands from the burning." (Johnson Clifton, *Old-Time Schools and Schoolbooks*, p. 12.)

3. Show why such copying of home-land types, even to the Latin grammar school, was perfectly natural.
4. The provision of the Law of 1642 requiring instruction in "the capital laws of the country" was new. How do you explain this addition to mother-land practices?
5. Show why the Law of 1642 was Calvinistic rather than Anglican in its origin.
6. Explain the meaning of the preamble to the Law of 1647.
7. Show how the Law of 1647 must go back for precedents to German, Dutch, and Scotch sources.
8. Apply the six principles stated by Mr. Martin, as embodied in the legislation of 1647, to modern state school practice, and show how we have adopted each in our laws.
9. Show also that the Law of 1647, as well as modern state school laws, is neither paternalistic nor socialistic in essential purpose.
10. Show that, though the mixture of religious sects in Pennsylvania made colonial legislation difficult, still it would have been possible to have enforced the Massachusetts Law of 1642, or the Pennsylvania laws of 1683 or 1693, in the colony. How do you explain the opposition and failure to do so?
11. Show how the charity schools for the poor, and church missionary-society schools, were the natural outcome of the English attitude toward elementary education.
12. Which of the three type plans in the American colonies by 1750 most influenced educational development in your State?
13. State the important contribution of Calvinism to our new-world life.
14. Explain the indifference of the Anglican Church to general education during the whole of our colonial period.
15. Explain what is meant by "The Puritan Church applied to its servant, the State," etc.

SELECTED READINGS

In the accompanying *Book of Readings* the following selections are reproduced:

183. Nichols: The Puritan Attitude.
184. Gov. Bradford: The Puritans leave England.
185. First Fruits: The Founding of Harvard College.
186. First Fruits: The First Rules for Harvard College.
 (*a*) Entrance Requirements.
 (*b*) Rules and Precepts.
 (*c*) Time and Order of Studies.
 (*d*) Requirements for Degrees.
187. College Charters: Extracts from, showing Privileges.
 (*a*) Harvard College, 1650.
 (*b*) Brown College, 1764.
188. Dillaway: Founding of the Free School at Roxburie.
189. Baird: Rules and Regulations for Hopkins Grammar School.
190. Statutes: The Massachusetts Law of 1642.
191. Statutes: The Massachusetts Law of 1647.
192. Court Records: Presentment of Topsfield for Violating the Law of 1642.
193. Statutes: The Connecticut Law of 1650.
194. *Statutes:* Plymouth Colony Legislation.
195. *Flatbush:* Contract with a Dutch Schoolmaster.

196. New Amsterdam: Rules for a Schoolmaster in.
197. Statutes: The Pennsylvania Law of 1683.
198. Minutes of Council: The First School in Philadelphia.
199. Murray: Early Quaker Injunctions regarding Schools.
200. Statutes: Apprenticeship Laws in the Southern Colonies.
(*a*) Virginia Statutes.
(*b*) North Carolina Court Records.
201. Stiles: A New England Indenture of Apprenticeship.
202. The New England Primer: Description and Digest.

QUESTIONS ON THE READINGS

1. What does the selection on The Puritan Attitude (183) reveal as to the extent and depth of the Reformation in England?
2. Characterize the feelings and emotions and desires of the Puritans, as expressed in the extract (184) from Governor Bradford's narrative.
3. Characterize the spirit behind the founding of Harvard College, as expressed in the extract from New England's First Fruits (185).
4. What was the nature and purpose of the Harvard College instruction as shown by the selection 186 a–d?
5. Point out the similarity between the exemptions granted to Harvard College by the Legislature of the colony (187 a) and those granted to mediæval universities (103–105). Compare the privileges granted Brown (187 b) and those contained in 104.
6. Compare the founding of the Free School at Roxbury (188) with the founding of an English Grammar School (141–43).
7. What does the distribution of scholars at Roxbury (188) show as to the character of the school?
8. State the essentials of the Massachusetts Law of 1642 (190).
9. Compare the Massachusetts Law of 1642 and the English Poor-Law of 1601 (190 with 174) as to fundamental principles involved in each.
10. What does the court citation of Topsfield (192) show?
11. What new principle is added (191) by the Law of 1647, and what does this new law indicate as to needs in the colony for classical learning?
12. Show how the Connecticut Law of 1650 (193) was based on the Massachusetts Law (190) of 1642.
13. What does the Plymouth Colony appeal for Harvard College (194 b) indicate as to community of ideas in early New England?
14. What type of school was it intended to endow from the Cape Cod fisheries (194 c)?
15. What is the difference between the Plymouth requirement as to grammar schools (194 d) and the Massachusetts requirement (191)?
16. Compare the rules for the New Haven Grammar School (189) with those for Colet's London School (138 a–c).
17. Characterize the early Dutch schools as shown by the rules for the schoolmaster (196) and the Flatbush contract (195).
18. Just what type of education did the Quakers mean to provide for, as shown in the extract from their Rules of Discipline (199)?
19. What kind of a school was the first one established in Philadelphia (198)?
20. Compare the proposed Pennsylvania Law of 1683 (197) and the Massachusetts Law of 1642 (190).
21. What conception of education is revealed by the Virginia apprenticeship laws (200 a, 1–3) and the North Carolina court records (200 b, 1–3)?
22. *Characterize the New England* Indenture of Apprenticeship given in 201.

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CHAPTER XVI

THE RISE OF SCIENTIFIC INQUIRY

New attitudes after the eleventh century. From the beginning of the twelfth century onward, as we have already noted, there had been a slow but gradual change in the character of human thinking, and a slow but certain disintegration of the Mediæval System, with its repressive attitude toward all independent thinking. Many different influences and movements had contributed to this change — the Moslem learning and civilization in Spain, the recovery of the old legal and medical knowledge, the revival of city life, the beginnings anew of commerce and industry, the evolution of the universities, the rise of a small scholarly class, the new consciousness of nationality, the evolution of the modern languages, the beginnings of a small but important vernacular literature, and the beginnings of travel and exploration following the Crusades — all of which had tended to transform the mediæval man and change his ways of thinking. New objects of interest slowly came to the front, and new standards of judgment gradually were applied. In consequence the mediæval man, with his feeling of personal insignificance and lack of self-confidence, came to be replaced by a small but increasing number of men who were conscious of their powers, possessed a new self-confidence, and realized new possibilities of intellectual accomplishment.

The Revival of Learning, first in Italy and then elsewhere in western Europe, was the natural consequence of this awakening of the modern spirit, and in the careful work done by the humanistic scholars of the Italian Renaissance in collecting, comparing, questioning, inferring, criticizing, and editing the texts, and in reconstructing the ancient life and history, we see the beginnings of the modern scientific spirit. It was this same critical, questioning spirit which, when applied later to geographical knowledge, led to the discovery of America and the circumnavigation of the globe; which, when applied to matters of Christian faith, brought on the Protestant Revolts; which, when applied to the problems of the universe, revealed the many wonderful fields of modern science; *and which, when* applied to government, led to a ques-

The Romans, as we have seen (chapter III), were essentially a practical people, good at getting the work of the world done, but not much given to theoretical discussion or scientific speculation. They were organizers, governors, engineers, executives, and literary workers rather than scientists. They executed many important undertakings of a practical character, such as the building of roads, bridges, aqueducts, and public buildings; organized government and commerce on a large scale; and have left us a literature and a legal system of importance, but they contributed little to the realm of pure science. The three great names in science in all their history are Strabo the geographer (63 B.C.–24 A.D.); Pliny the Elder (23–79 A.D.), who did notable work as an observer in natural history; and Galen (a Roman-Greek), in medicine. They, like the Greeks, were pervaded by the same fear that their science might prove useful, whereas they cultivated it largely as a mental exercise (**R. 203**).

The Christian reaction against inquiry. The Christian attitude toward inquiry was from the first inhospitable, and in time became exceedingly intolerant. The tendency of the Western Church, it will be remembered (p. 94), was from the first to reject all Hellenic learning, and to depend upon emotional faith and the enforcement of a moral life. By the close of the third century the hostility to pagan schools and Hellenic learning had become so pronounced that the *Apostolic Constitutions* (**R. 41**) ordered Christians to abstain from all heathen books, which could contain nothing of value and only served "to subvert the faith of the unstable." In 401 A.D. the Council of Carthage forbade the clergy to read any heathen author, and Greek learning now rapidly died out in the West. For a time it was almost entirely lost. In consequence Greek science, then best represented by Alexandrian learning, and which contained much that was of great importance, was rejected along with other pagan learning. The very meager scientific knowledge that persisted into the Middle Ages in the great mediæval textbooks (p. 162), as we have seen in the study of the Seven Liberal Arts (chapter VII), came to be regarded as useful only in explaining passages of Scripture or in illustrating the ways of God toward man. The one and only science worthy of study was Theology, to which all other learning tended (see Figure 44, p. 154).

The history of Christianity throughout all the Dark Ages is a *history of the* distrust of inquiry and reason, and the emphasis of

blind emotional faith. Mysticism, good and evil spirits, and the interpretation of natural phenomena as manifestations of the Divine will from the first received large emphasis. The worship of saints and relics, and the great development of the sensuous and symbolic, changed the earlier religion into a crude polytheism. During the long period of the Middle Ages the miraculous flourished. The most extreme superstition pervaded all ranks of society. Magic and prayers were employed to heal the sick, restore the crippled, foretell the future, and punish the wicked. Sacred pools, the royal touch, wonder-working images, and miracles through prayer stood in the way of the development of medicine (**R. 204**). Disease was attributed to satanic influence, and a regular schedule of prayers for cures was in use. Sanitation was unknown. Plagues and pestilences were manifestations of Divine wrath, and hysteria and insanity were possession by the devil to be cast out by whipping and torture. One's future was determined by the position of the heavenly bodies at the time of birth. Eclipses, meteors, and comets were fearful portents of Divine displeasure:

> Eight things there be a Comet brings,
> When it on high doth horrid rage;
> Wind, Famine, Plague, and Death to Kings,
> War, Earthquakes, Floods, and Direful Change.[1]

The literature on magic was extensive. The most miraculous happenings were recorded and believed. Trial by ordeal, following careful religious formulæ, was common before 1200, though prohibited shortly afterward by papal decrees (1215, 1222). The insistence of the Church on "the willful, devilish character of heresy," and the extension of heresy to cover almost any form of honest doubt or independent inquiry, caused an intellectual stagnation along lines of scientific investigation which was not relieved for more than a thousand years. The many notable advances in physics, chemistry, astronomy, and medicine made by Moslem scholars (chapter VIII) were lost on Christian Europe, and had to be worked out again centuries later by the scholars of the western world. Out of the astronomy of the Arabs the Christians got only astrology; out of their chemistry they got only alchemy. Both in time stood seriously in the way of real scientific thinking and discovery.

[1] From a collection of doggerel rhymes put out by two pastors and doctors of theology at Basle, in 1618, by the names of Grassner and Gross, to interpret the orthodox theory of comets to peasants and school children.

Growing tolerance changed by the Protestant Revolts. After the rise of the universities, the expansion of the minds of men which followed the Crusades and the revival of trade and industry, the awakening which came with the revival of the old learning and the rise of geographical discovery, the church authorities assumed a broader and a more tolerant attitude toward inquiry and reason than had been the case for hundreds of years. It would have been surprising, with the large number of university-trained men entering the service of the Church, had this not been the case. By the middle of the fifteenth century it looked as though the Renaissance spirit might extend into many new directions, and by 1500 the world seemed on the eve of important progress in almost every line of endeavor. As was pointed out earlier (p. 259), the Church was more tolerant than it had been for centuries, and about the year 1500 was the most stimulating time in the history of our civilization since the days of Alexandria and ancient Rome.

In 1517 Luther nailed his theses to the church door in Wittenberg. The Church took alarm and attempted to crush him, and soon the greatest contest since the conflict between paganism and Christianity was on. Within half a century all northern lands had been lost to the ancient Church (see map, p. 296); the first successful challenge of its authority during its long history.

The effect of these religious revolts on the attitude of the Church toward intellectual liberty was natural and marked. The tolerance of inquiry recently extended was withdrawn, and an era of steadily increasing intolerance set in which was not broken for more than a century. In an effort to stop the further spread of the heresy, the Church Council of Trent (1545–63) adopted stringent regulations against heretical teachings (p. 303), while the sword and torch and imprisonment were resorted to to stamp out opposition and win back the revolting lands. A century of merciless warfare ensued, and the hatreds engendered by the long and bitter struggle over religious differences put both Catholic and Protestant Europe in no tolerant frame of mind toward inquiry or new ideas. The Inquisition, a sort of universal mediæval grand jury for the detection and punishment of heretics, was revived, and the Jesuits, founded in 1534–40, were vigorous in defense of the Church and bitter in their opposition to all forms of *independent* inquiry and Protestant heresy.

It was into this post-Reformation atmosphere of suspicion and

distrust and hatred that the new critical, inquiring, questioning spirit of science, as applied to the forces of the universe, was born. A century earlier the first scientists might have obtained a respectful hearing, and might have been permitted to press their claims; after the Protestant Revolts had torn Christian Europe asunder this could hardly be. As a result the early scientists found themselves in no enviable position. Their theories were bitterly assailed as savoring of heresy; their methods and purposes were alike suspected; and any challenge of an old long-accepted idea was likely to bring a punishment that was swift and sure. From the middle of the sixteenth to the middle of the seventeenth century was not a time when new ideas were at a premium anywhere in western Europe. It was essentially a period of reaction, and periods of reaction are not favorable to intellectual progress. It was into this century of reaction that modern scientific inquiry and reasoning, itself another form of expression of the intellectual attitudes awakened by the work of the humanistic scholars of the Italian Renaissance, made its first claim for a hearing.

The beginnings of modern scientific method. One of the great problems which has always deeply interested thinking men in all lands is the nature and constitution of the material universe, and to this problem people in all stages of civilization have worked out for themselves some kind of an answer. It was one of the great speculations of the Greeks, and it was at Alexandria, in the period of its decadence, that the Egyptian geographer Ptolemy (138 A.D.) had offered an explanation which was accepted by Christian Europe and which dominated all thinking on the subject during the Middle Ages. He had concluded that the earth was located at the center of the visible universe, immovable, and that the heavenly bodies moved around the earth, in circular motion, fixed in crystalline spheres.[1] This explanation accorded perfectly with Christian ideas as to creation, as well as with Christian conceptions as to the position and place of man and his relation to the heavens above and to a hell beneath. This theory

[1] "The earth is a sphere, situated in the center of the heavens; if it were not, one side of the heavens would appear nearer to us than the other, and the stars would be larger there. The earth is but a point in comparison to the heavens, because the stars appear of the same magnitude and at the same distance *inter se*, no matter where the observer goes on the earth. It has no motion of translation. . . . If there were a motion, it would be proportionate to the great mass of the earth and would leave behind animals and objects thrown into the air. This also disproves the suggestion made by some, that the earth, while immovable in space, turns round on its own axis." (Ptolemy, Digest of argument of Book 1 of the *Almagest.*)

was obviously simple and satisfactory, and became sanctified with time. As we see it now the wonder is that such an explanation could have been accepted for so long. Only among an uninquisitive people could so imperfect a theory have endured for over fourteen centuries.

In 1543 a Bohemian church canon and physician by the name of Nicholas Copernicus published his *De Revolutionibus Orbium Celestium*, in which he set forth the explanation of the universe which we now know. He piously dedicated the work to Pope Paul III, and wisely refrained from publishing it until the year of his death.[1] Anything so completely upsetting the Christian conception as to the place and position of man in the universe could hardly be expected to be accepted, particularly at the time of its publication, without long and bitter opposition.



FIG. 113.
NICHOLAS KOPERNIK (Copernicus), (1473–1543)

In the dedicatory letter (R. 205), Copernicus explains how, after feeling that the Ptolemaic explanation was wrong, he came to arrive at the conclusions he did. The steps he set forth form an excellent example of a method of thinking now common, but then almost unknown. They were:

1. Dissatisfaction with the old Ptolemaic explanation.
2. A study of all known literature, to see if any better explanation had been offered.
3. Careful thought on the subject, until his thinking took form in a definite theory.
4. Long observation and testing out, to see if the observed facts would support his theory.
5. The theory held to be correct, because it reduced all known facts to a systematic order and harmony.

This is as clear a case of inductive reasoning as was Petrarch's exposure of the forgery of the so-called "Donation of Constantine," an example of deductive reasoning. Both used a new method — the method of modern scholarship. In both cases the results were revolutionary. As Petrarch stands forth in history as the first modern classical scholar, so Copernicus stands

[1] *In the dedicatory letter* Copernicus states that he had had the completed manuscript *in his study for* thirty-six years, and published it now only on the urging of *friends.*

forth as the first modern scientific thinker. The beginnings of all modern scientific investigation date from 1543. Of his work a recent writer (E. C. J. Morton) has said:

> Copernicus cannot be said to have flooded with light the dark places of nature — in the way that one stupendous mind subsequently did — but still, as we look back through the long vista of the history of science, the dim Titanic figure of the old monk seems to rear itself out of the dull flats around it, pierces with its head the mists that overshadow them, and catches the first gleam of the rising sun, . . .
>
> Like some iron peak, by the Creator
> Fired with the red glow of the rushing morn.

The new method of inquiry applied by others. At first Copernicus' work attracted but little attention. An Italian Dominican by the name of Giordano Bruno (1548–1600), deeply impressed by the new theory, set forth in Latin and Italian the far-reaching and majestic implications of such a theory of creation, and was burned at the stake at Rome for his pains. A Dane, Tycho Brahe, after twenty-one years of careful observation of the heavens, during which time he collected "a magnificent series of observations, far transcending in accuracy [1] and extent anything that had been accomplished by his predecessors," showed Aristotle to be wrong in many particulars. His observations of the comet of 1577 led him to conclude that the theory of crystalline spheres was impossible, and that the common view of the time as to their nature [2] was absurd. In 1609 a German by the name of Johann Kepler (1571–1630), using the records of observations which Tycho Brahe had accumulated and applying them to the planet Mars, proved the truth of the Copernican theory and framed his famous three laws for planetary motion.



FIG. 114. TYCHO BRAHE (1546–1601)

[1] To secure the greatest possible accuracy he constructed a wooden outdoor quadrant some ten feet in radius, with a brass scale, thus permitting readings to a fraction of an inch.

[2] "The current view was that comets were formed by the ascending of human sins from the earth, that they were changed into a kind of gas, and ignited by the anger of God. This poisoned stuff then fell down on people's heads, causing all kinds of mischief, such as pestilence, sudden death, storms, etc." (Dryer, J. L. E., *Tycho Brahe.*)

Finally an Italian, Galileo Galilei, a professor at the University of Pisa, developing a telescope that would magnify to eight diameters, discovered Jupiter's satellites and Saturn's rings. The story of his discovery of the satellites of Jupiter is another interesting illustration of the careful scientific reasoning of these early workers (**R. 206**). Galileo also made a number of discoveries in physics, through the use of new scientific methods, which completely upset the teachings of the Aristotelians, and made the most notable advances in mechanics since the days of Archimedes. For his pronounced advocacy of the Copernican theory he was called to Rome (1615) by the Cardinals of the Inquisition, the Copernican theory was condemned as "absurd in philosophy" and as "expressly contrary to Holy Scripture," and Galileo was compelled to recant (1616) his error.[1] For daring later (1632) to assume that he might, under a new Pope, defend the Copernican theory, even in an indirect manner, he was again called before the inquisitorial body, compelled to recant and abjure his errors (**R. 207**) to escape the stake, and was then virtually made a prisoner of the Inquisition for the remainder of his life. So strongly had the forces of mediævalism reasserted themselves after the Protestant Revolts!



FIG. 115. GALILEO GALILEI (1564–1642)

Finally the English scholar Newton (1642–1728), in his *Principia* (1687), settled permanently all discussions as to the Copernican theory by his wonderful mathematical studies. He demonstrated mathematically the motions of the planets and comets, proved Kepler's laws to be true, explained gravitation and the tides, made clear the nature of light,



FIG. 116. SIR ISAAC NEWTON (1642–1727)

[1] "For over fifty years he was the knight militant of science, and almost alone did successful battle with the hosts of Churchmen and Aristotelians who attacked *him on* all sides — one man against a world of bigotry and ignorance. If then . . . *when face to face* with the terrors of the Inquisition he, like Peter, denied his Master, *no honest man*, knowing all the circumstances, will be in a hurry to blame him." (Mie, J. J., *Galileo, His Life and Work*.)

and reduced dynamics to a science. Of his work a recent writer, Karl Pearson, has said:

> The Newtonian laws of motion form the starting point of most modern treatises on dynamics, and it seems to me that physical science, thus started, resembles the mighty genius of an Arabian tale emerging amid metaphysical exhalations from the bottle in which for long centuries it had been corked down.

So far-reaching in its importance was the scientific work of Newton that Pope's couplet seems exceedingly applicable:

> Nature and Nature's laws lay hid in night;
> God said, "Let Newton be," and there was light.

The new method applied in other fields. The new method of study was soon applied to other fields by scholars of the new type, here and there, and always with fruitful results. The Englishman, William Gilbert (1540–1603) published, in 1600, his *De Arte Magnetica*, and laid the foundations of the modern study of electricity and magnetism. A German-Swiss by the name of Hohenheim, but who Latinized his name to Paracelsus (1493–1541), and who became a professor in the medical faculty at the University of Basle, in 1526 broke with mediæval traditions by being one of the first university scholars to refuse to lecture in Latin. He ridiculed the medical theories of Hippocrates (p. 197) and Galen (p. 198), and, regarding the human body as a chemical compound, began to treat diseases by the administration of chemicals. A Saxon by the name of Landmann, who also Latinized his name to Agricola (1494–1555), applied chemistry to mining and metallurgy, and a French potter named Bernard Palissy (c. 1500–88) applied chemistry to pottery and the arts. To Paracelsus, Agricola, and Palissy we are indebted for having laid, in the sixteenth century, the foundations of the study of modern chemistry.



FIG. 117. WILLIAM HARVEY (1578–1657)

A Belgian by the name of Vesalius (1514–64) was the first modern to dissect the human body, and for so doing was sentenced by the Inquisition to perform a penitential journey to Jerusalem. One of his disciples discovered the valves in the veins and was the teacher of the Englishman, *William Harvey, who* discovered the circulation of the blood and

later (1628) dared to publish the fact to the world. These men established the modern studies of anatomy and physiology. Another early worker was a Swiss by the name of Conrad Gessner (1516–65), who observed and wrote extensively on plants and animals, and who stands as the first naturalist of modern times.

The sixteenth century thus marks the rise of modern scientific inquiry, and the beginnings of the study of modern science. The number of scholars engaged in the study was still painfully small, and the religious prejudice against which they worked was strong and powerful, but in the work of these few men we have not only the beginnings of the study of modern astronomy, physics, chemistry, metallurgy, medicine, anatomy, physiology, and natural history, but also the beginnings of a group of men, destined in time to increase greatly in number, who could see straight, and who sought facts regardless of where they might lead and what preconceived ideas they might upset. How deeply the future of civilization is indebted to such men, men who braved social ostracism and often the wrath of the Church as well, for the, to them, precious privilege of seeing things as they are, we are not likely to over-estimate. In time their work was destined to reach the schools, and to materially modify the character of all education.

Human reason in the investigation of nature. To the English statesman and philosopher, Francis Bacon, more than to any one else, are we indebted for the proper formulation and statement of this new scientific method. Though not a scientist himself, he has often been termed "the father of modern science." Seeing clearly the importance of the new knowledge, he broke entirely with the old scholastic deductive logic as expressed in the *Organon*, of Aristotle, and formulated and expressed the methods of inductive reasoning in his *Novum Organum*, published in 1620. In this he showed the insufficiency of the method of argumentation; analyzed and formulated the inductive method of reasoning, of which his study as to the nature of heat[1] is a good



FIG. 118. FRANCIS BACON (1561–1626)

[1] *See* Routledge, R., *A Popular History of Science*, pp. 135–36, for a good digest of Bacon's inductive investigation, as a result of which he arrived at the conclusion that "heat is an expansive bridled motion, struggling in the small particles of bodies."

example; and pointed out that knowledge is a process, and not an end in itself; and indicated the immense and fruitful field of science to which the method might be applied. By showing how to learn from nature herself he turned the Renaissance energy into a new direction, and made a revolutionary break with the disputations and deductive logic of the Aristotelian scholastics which had for so long dominated university instruction.

In formulating the new method he first pointed out the defects of the learning of his time, which he classified under the head of "distempers," three in number, and as follows:

1. *Fantastic learning:* Alchemy, magic, miracles, old-wives, tales, credulities, superstitions, pseudo-science, and impostures of all sorts inherited from an ignorant past, and now conserved as treasures of knowledge.
2. *Contentious learning:* The endless disputations of the Scholastics about questions which had lost their significance, deductive in character, not based on any observation, not aimed primarily to arrive at truth, "fruitful of controversy, and barren of effect."
3. *Delicate learning:* The new learning of the humanistic Renaissance, verbal and not real, stylish and polished but not socially important, and leading to nothing except a mastery of itself.

As an escape from these three types of distempers, which well characterized the three great stages in human progress from the sixth to the fifteenth centuries, Bacon offered the inductive method, by means of which men would be able to distinguish true from false, learn to see straight, create useful knowledge, and fill in the great gaps in the learning of the time by actually working out new knowledge from the unknown. The collecting, organizing, comparing, questioning, and inferring spirit of the humanistic revival he now turned in a new direction by organizing and formulating for the work a new *Organum* to take the place of the old *Organon* of Aristotle. In Book I he sets forth some of the difficulties (R. 208) with which those who try new experiments or work out new methods of study have to contend from partisans of old ideas.

The *Novum Organum* showed the means of escape from the errors of two thousand years by means of a new method of thinking and work. Bacon did not invent the new method — it had been used since man first began to reason about phenomena, and was the method by means of which Wycliffe, Luther, Magellan, Copernicus, Brahe, and Gilbert had worked—but he was the first to formulate it clearly and to point out the vast field of new and use-

ful knowledge that might be opened up by applying human reason, along inductive lines, to the investigation of the phenomena of nature. His true service to science lay in the completeness of his analysis of the inductive process, and his declaration that those who wish to arrive at useful discoveries must travel by that road. As Macaulay well says, in his essay on Bacon:

> He was not the maker of that road; he was not the discoverer of that road; he was not the person who first surveyed and mapped that road. But he was the person who first called the public attention to an inexhaustible mine of wealth which had been utterly neglected, and which was accessible by that road alone.

To stimulate men to the discovery of useful truth, to turn the energies of mankind — even slowly — from assumption and disputation to patient experimentation,[1] and to give an impress to human thinking which it has retained for centuries, is, as Macaulay well says, "the rare prerogative of a few imperial spirits." Macaulay's excellent summary of the importance of Bacon's work (**R. 209**) is well worth reading at this point.

The new method in the hands of subsequent workers. By the middle of the seventeenth century many important advances had been made in many different lines of scientific work. In the two centuries between 1450 and 1650, the foundations of modern mathematics and mechanics had been laid. At the beginning of the period Arabic notation and the early books of Euclid were about all that were taught; at its end the western world had worked out decimals, symbolic algebra, much of plane and spherical trigonometry, mechanics, logarithms (1614) and conic sections (1637), and was soon to add the calculus (1667–87). Mercator had published the map of the world (1569) which has ever since born his name, and the Gregorian calendar had been introduced (1572). The barometer, thermometer, air-pump, pendulum clock, and the telescope had come into use in the period. Alchemy had passed over into modern chemistry; and the astrologer was finding less and less to do as the astronomer took his place. The English Hippocrates, Thomas Sydenham (1624–89), during this period laid the foundations of modern medical study, and the microscope was applied to the study of organic forms. Modern ideas as to light and optics and gases, and the theory of gravita-

[1] Bacon himself died a victim of one of his inductive experiments. Wishing to *try out his theory* that cold would prevent or retard putrefaction, he killed a *chicken, cleaned it,* and packed it in snow. In so doing he contracted a cold which *caused his death.*

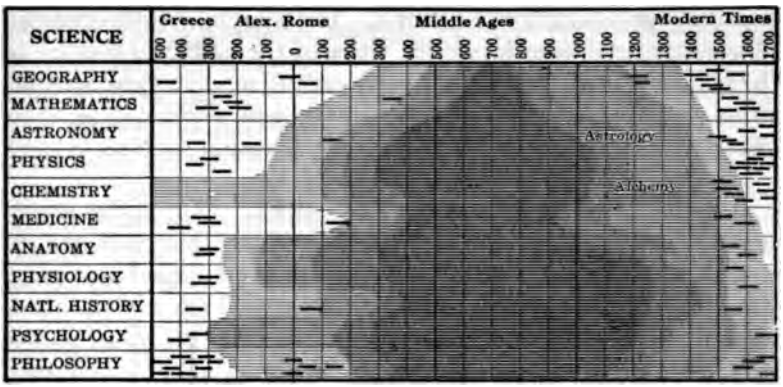


FIG. 119. THE LOSS AND RECOVERY OF THE SCIENCES

Each short horizontal line indicates the life-span of a very distinguished scholar in the science. Mohammedan scientists have not been included. The relative neglect or ignorance of a science has been indicated by the depth of the shading. The great loss to civilization caused by the barbarian inroads and the hostile attitude of the early Church is evident.

tion, were about to be set forth. All these advances had been made during the century following the epoch-making labors of Copernicus, the first modern scientific man to make an impression on the thinking of mankind.

Accompanying this new scientific work there arose, among a few men in each of the western European countries, an interest in scientific studies such as the world had not witnessed since the days of the Alexandrian Greek. This interest found expression in the organization of scientific societies, wholly outside the universities of the time, for the reporting of methods and results, and for the mingling together in sympathetic companionship of these seekers after new truth. The most important dates connected with the rise of these societies are:

1603. The Lyncean Society at Rome.
1619. Jungius founded the Natural Science Association at Rostock.
1645. The Royal Society of London began to meet; constituted in 1660; chartered in 1662.
1657. The Academia del Cimento at Florence.
1662. The Imperial Academy of Germany.
1666. The Academy of Sciences in France.
1675. The National Observatory at Greenwich established.

After 1650 the advance of science was rapid. The spirit of modern inquiry, which in the sixteenth century had animated but a few minds, by the middle of the seventeenth had extended to all

the principal countries of Europe. The striking results obtained during the seventeenth century revealed the vast field waiting to be explored, and filled many independent modern-type scholars with an enthusiasm for research in the new domain of science. By the close of the eighteenth century the main outlines of most of the modern sciences had been established.

Leading thinkers outside the universities. During the seventeenth century, and largely during the eighteenth as well, the extreme conservatism of the universities, their continued control by their theological faculties, and their continued devotion to theological controversy and the teachings of state orthodoxy rather than the advancement of knowledge, served to make of them such inhospitable places for the new scientific method that practically all the leading workers with it were found outside the universities. This was less true of England than other lands, but was in part true of English universities as well. As civil servants, court attachés, pensioners of royalty, or as private citizens of means they found, as independent scholars reporting to the recently formed scientific societies, a freedom for investigation and a tolerance of ideas then scarcely possible anywhere in the university world.

Tycho Brahe and Kepler were pensioners of the Emperor at Prague. Lord Bacon was a lawyer and political leader, and became a peer of England. Descartes, the mathematician and founder of modern philosophy, to whom we are indebted for conic sections; Napier, inventor of logarithms; and Ray and Willoughby, who did the first important work in botany and zoölogy in England, were all independent scholars. The air-pump was invented by the Burgomaster of Madgeburg. Huygens, the astronomer and inventor of the clock was a pensioner of the King of France. Cassini, who explained the motion of Jupiter's satellites, was Astronomer Royal at Paris. Halley, who demonstrated the motions of the moon and who first predicted the return of a comet, held a similar position at Greenwich. Van Helmont and Boyle, who together laid the foundations of our chemical knowledge, were both men of noble lineage who preferred the study of the new sciences to a life of ease at court. Harvey was a physi-



FIG. 120. RENÉ DESCARTES (1596–1650)

cian and demonstrator of anatomy in London. Sydenham, the English Hippocrates, was a pensioner of Cromwell and a physician in Westminster. The German mathematical scholar, Leibnitz, who jointly with Newton discovered the calculus, scorned a university professorship and remained an attaché of a German court. Newton, though for a time a professor at Cambridge, during most of his mature life held the royal office of Warden of the Mint. These are a few notable illustrations of scientific scholars of the first rank who remained outside the universities to obtain advantages and freedom not then to be found within their walls. Much these same conditions continued throughout most of the eighteenth century, during which many remarkable advances in all lines of pure science were made. By the close of this century the universities had been sufficiently modernized that scientific workers began to find in them an atmosphere conducive to scientific teaching and research; during the nineteenth century they became the homes of scientific progress and instruction; to-day they are deeply interested in the promotion of scientific research.

QUESTIONS FOR DISCUSSION

1. Show that the rise of scientific inquiry was but another manifestation of the same inquiring spirit which had led to the recovery of the ancient literatures and history.
2. What do you understand to be meant by the failure of the Greeks to standardize their observations by instruments?
3. Show that it would be possible largely to determine the character of a civilization, if one knew only the prevailing ideas and conceptions as to scientific and religious matters.
4. Show the two different types of reasoning involved in the deduction of Petrarch (p.386) and the induction of Copernicus.
5. Of which type was the reasoning of Galileo as to Jupiter's satellites?
6. Show that the three "distempers" described by Bacon characterize the three great stages in human progress from the sixth to the fifteenth centuries.
7. How do you explain the long rejection of the new sciences by the universities?

SELECTED READINGS

In the accompanying *Book of Readings* the following selections are reproduced:

203. Macaulay: Attitude of the Ancients toward Scientific Inquiry.
204. Franck: The Credulity of Mediæval People.
205. Copernicus: How he arrived at the theory he set forth.
206. Brewster: Galileo's Discovery of the Satellites of Jupiter.
207. Inquisition: The Abjuration of Galileo.
208. Bacon: On Scientific Progress.
209. *Macaulay: The* Importance of Bacon's Work.

QUESTIONS ON THE READINGS

1. How do you explain the attitude of the ancients toward scientific inquiry (**203**, **208**)?
2. State the ancient purpose in pursuing scientific studies (**203**).
3. Contrast Bacon and Plato as to aims (**203**).
4. Show that the thinking of Copernicus as to the motions of the heavenly bodies (**205**) was an excellent example of deductive thinking.
5. Show that the discovery and reasoning of Galileo (**206**) was an example of the common method of reasoning of to-day.
6. Were the difficulties that surrounded scientific inquiry and progress, as described by Bacon (**208**), easily removed?
7. Explain the readiness with which the clergy have so commonly opposed scientific inquiry for fear that the results might upset preconceived theological ideas.

SUPPLEMENTARY REFERENCES

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CHAPTER XVII

THE NEW SCIENTIFIC METHOD AND THE SCHOOLS

The rise of realism in education. As will be remembered from our study of the educational results of the Revival of Learning (chapter XI), the new schools established, in the reaction against mediævalism, to teach pure Latin and Greek, in time became formal and lifeless (p. 283), and their aim came to be almost entirely that of imparting a mastery of the Ciceronian style, both in writing and in speech. This idea, first clearly inaugurated by Sturm at Strassburg (**R.** 137), had now become fixed, and in its extreme is illustrated by the teachings of the Jesuit Campion at Prague (**R.** 146). As a reaction against this extreme position of the humanistic scholars there arose, during the sixteenth century, and as a further expression of the new critical spirit awakened by the Revival of Learning, a demand for a type of education which would make truth rather than beauty, and the realities of the life of the time rather than the beauties of a life of Roman days, the aim and purpose of education. This new spirit became known as Realism, was contemporaneous with the rise of scientific inquiry, and was an expression of a similar dissatisfaction with the learning of the time. As applied to education this new spirit may be said to have manifested itself in three different stages, as follows:

1. Humanistic realism.
2. Social realism.
3. Sense realism.

We will explain each of these, briefly, in order.

I. HUMANISTIC REALISM

A new aim in instruction. Humanistic realism represents the beginning of the reaction against form and style and in favor of ideas and content. The humanistic realists were in agreement with the classical humanists that the old classical literatures and the Bible contained all that was important in the education of youth. The ancient literatures, they held, presented "not only the widest product of human intelligence, but practically all that was worthy of man's attention." The two groups differed, however, *in that the classical* humanists conceived the aim of educa-

tion to be the mastery of the vocabulary and style of Cicero, and the production of a new race of Roman youths for a revived Latin scholarly world, while the new humanistic realists wanted to use the old literatures as a means to a new end — that of teaching knowledge that would be useful in the world in which they lived. Monroe has so well expressed the humanistic-realist attitude that a passage from his History is worth quoting here. He says:

> Not only did ancient philosophy contain the true philosophy of this life, but languages were the key to the real understanding of the Christian religion. Not only did mastery of these languages give power of speech, and hence influence over one's fellows; but, if military science was to be studied, it could in no place be better searched for than in Cæsar and in Xenophon; was agriculture to be practiced, no better guide was to be found than Virgil or Columella; was architecture to be mastered, no better way existed than through Vitruvius; was geography to be considered, it must be through Mela or Solinus; was medicine to be understood, no better means than Celsus existed; was natural history to be appreciated, there was no more adequate source of information than Pliny and Seneca. Aristotle furnished the basis of all the sciences, Plato of all philosophy, Cicero of all institutional life, and the Church Fathers and the Scriptures of all religion.

Exponents of humanistic realism. The Dutch international scholar Erasmus (1466?–1536) (p. 274), the Frenchman Rabelais (1483–1553), and the English poet Milton (1608–74) stand as the clearest representatives of this new humanistic realism.

Erasmus had clearly distinguished between the education of words and the education of things, had pointed out the ease with which real truth is learned and retained, and had urged the study of the content rather than the form of the ancient authors. In his *System of Studies* he said:

> From these very authors (Latin and Greek), whom we read for the sake of improving our language, incidentally, in no small degree is a knowledge of things gathered.

In his *Ciceronian* he had ridiculed those who mistook the form for the spirit of the ancients.

The French non-conforming monk, curé, physician, and university scholar, François Rabelais, in his satirical *Life of Gargantua* (1535) and *The Heroic Deeds of Pantagruel* (1533) had set forth, even more clearly, the idea of obtaining from a study of the ancient authors (R. 210) knowledge that would be useful. Writing largely in the character of a clown and a fool, because such was a safer method, he protested against the formal, shallow, and in-

sincere life of his age. He made as vigorous a protest against mediævalism and formalism as he dared, for he lived in a time when new ideas were dangerous commodities for one to carry about or to try to express. He ridiculed the old scholastic learning, set forth the idea of using the old classics for realistic as well as humanistic ends, and also advocated physical, moral, social, and religious education in the spirit of the best writers and teachers of the Italian Renaissance. His book was extensively read and had some influence in shaping thinking, though Rabelais's importance in the history of education lies rather in his influence on later educational thinkers than on the life of his time.



FIG. 121. FRANÇOIS RABELAIS (1483–1553)

Perhaps the clearest example of humanistic realism is found in the writings of the English poet and humanitarian, John Milton. His *Tractate on Education* (1644) was extensively read, and was influential in shaping educational practice in the non-conformist secondary academies which arose a little later in England. Still later his ideas indirectly somewhat influenced American development.

Milton first gives us an excellent statement of the new religious-civic aim of post-Reformation education (**R. 211**), and then points out the defects of the existing education, whereby boys "spend seven or eight years merely in scraping together so much miserable Latine and Greek, as might be learnt otherwise easily and delightfully in one year." He then presents his plan for "a compleat and generous Education" for "noble and gentle youths," and tells "how all this may be done between twelve and one and twenty, less time than is now bestowed in pure trifling at Grammar and Sophistry." The course of study he outlines (**R. 212**) is enormous. The first year, that is beginning at twelve, the boy is to learn Latin grammar, arithmetic, and geometry, and to read simple Latin and Greek. During the next three or four years the pupil is to master Greek, and to study agriculture, geography, natural philosophy, physiology, mathematics, fortification, engineering, architecture, and natural history, all by reading the chief writings of the ancients, in prose and poetry, on these subjects. During the remaining years to twenty-one the pupil, similarly, *is to obtain* ethical instruction from the Greeks and the

Bible; learn Hebrew, Greek, Roman, and Saxon law; learn Italian and Hebrew; and study economics, politics, history, logic, rhetoric, and poetry by reading selected ancient authors. What Rabelais suggested in jest for his giant, Milton adopted as a program for the school. In addition, in thoroughly characteristic modern English fashion, he makes careful provision for daily exercise and play. Aside, though, from its impossibility of accomplishment except by a superior few, Milton's plan is thoroughly representative of the new humanistic-realistic point of view — that is, that education should impart useful information, though the information as Milton conceived it was to be drawn almost entirely from the books of the ancients.



FIG. 122. JOHN MILTON (1608–74)

Educational results of humanistic realism. The importance of humanistic realism in the history of education lies largely in that it was the first of a series of reactions that led later to sense-realism — that is, to the study of science and the application of scientific method in the schools.

In England it possesses still larger importance. Milton had called his institution an "Academy." [1] After the restoration of the Stuarts (Charles II, 1660), some two thousand non-conforming clergymen were "dispossessed" by the Act of Conformity (1662; **R. 166**), and soon after this the children of Non-Conformists were excluded from the grammar schools and universities. Many of these clergymen now turned to teaching as a means of earning a livelihood and serving their people, and the ideas of the non-conformist Milton were influential in turning the schools thus established even further toward the study of useful subjects. Many of the new schools offered instruction in the modern languages, logic, rhetoric, ethics, geography, astronomy, algebra, geometry, trigonometry, surveying, navigation, history, oratory,

[1] See footnote 1, p. 273, on the origin of the term. Six years before the publication of the *Tractate*, Milton had visited Italy, and had been much entertained in Florence by members of the Academy and University there. In the *Tractate* he outlined a plan for a series of classical Academies for England, many of which were *established*. From England the term was carried to America, and became the name *for a great development* of semi-private secondary schools which flourished during *the late eighteenth* and early nineteenth centuries.

economics, and natural and moral philosophy, as well as the old classical subjects. All teaching, too, was done in English, and the study of English language and literature was emphasized. This made these non-conformist academies in many respects superior to the older Latin grammar schools. After the enactment of the Toleration Act, in 1689, these schools were allowed to incorporate and were gradually absorbed into the existing Latin grammar-school system of England, but unfortunately without producing much change in the character of these older institutions.

The idea of offering instruction in these new studies was in time carried to America, where better results were obtained. At first a few of the subjects, such as the mathematical studies, surveying, navigation, and English, were introduced into the existing Latin grammar or other schools of secondary grade. Especially was this true in the colonies south of New England. After 1751, and especially after about 1780, distinct Academies arose in the United States (chapter XVIII), whose purpose was to offer instruction in all these new subjects of study. From these our modern high schools have been derived.

II. SOCIAL REALISM

Montaigne and Locke. Social realism represents a still further reaction away from the humanistic schools. It was the natural reaction of practical men of the new world against a type of education that tended to perpetuate the pedantry of an earlier age, by devoting its energies to the production of the scholar and professional man to the neglect of the man of affairs. The social realists were small in number, but powerful because of their important social connections and wealth, and they were very determined to have an education suited to their needs, even if they had to create it themselves (**R. 213**). The French nobleman, scholar, author, and civic officer, Lord Montaigne (1533–92), and the English philosopher, John Locke (1632–1704), were the clearest exponents of this new point of view, though it found expression in the writings of many others. Each declared *for a practical*, useful type of education for the



FIG. 123. MICHEL DE MONTAIGNE (1533–92)

young boy who was to live the life of a gentleman in the world of affairs.

Neither had any sympathy with the colleges and grammar schools of the time (R. 214), and both rejected the school for the private tutor. This tutor must be selected with great care, and first of all must be a well-bred gentleman — a man, as Montaigne says, "who has rather a well-made than a well-filled head" (R. 215). Locke cautions that "one fit to educate and form the Mind of a young Gentleman is not every where to be found," and of the common type of teacher he asks, "When such an one has empty'd out into his Pupil all the Latin and Logick he has brought from the University, will that Furniture make him a fine Gentleman?" (R. 216).

Both condemn the school training of their time, and both urge that the tutor train the judgment and the understanding rather than the memory. To impart good manners rather than mere information, and to train for life in the world rather than for the life of a scholar, seem to both of fundamental importance in the education of a boy. "The great world," says Montaigne, "is the mirror wherein we are to behold ourselves. In short, I would have this to be the book my young gentleman should study with the most attention." "Latin and Learning," says Locke, "make all the Noise; and the main Stress is laid upon Proficiency in Things a great Part whereof belong not to a Gentleman's Calling; which is to have the Knowledge of a Man of Business, a Carriage suitable to his Rank, and to be eminent and useful to his Country, according to his Station" (R. 216). Both emphasized the importance of travel abroad as an important factor in the education of a gentleman.

Their place in the history of education. Both Montaigne and Locke were concerned alone with the education of the sons of gentlemen, individuals now coming rapidly into prominence to dispute place in the world of affairs with the higher nobility on the one hand and the clergy on the other. With the education of any other class Montaigne never concerned himself. As for Locke, he was later appointed a King's Commissioner, with certain oversight of the poor, and for the education of the children of such he drew up a careful report which, in true English fashion, provided for their training in workhouses and their apprenticeship to a trade (R. 217). He wrote nothing with regard tc the education of the children of middle-class workers and tradesmen.

Both authors also deal entirely with the work of a tutor, and not with the work of a teacher in a school. Neither deals specifically with elementary education, but rather with what, in Europe, would be called the secondary-school period in the education of a boy. Locke was extensively read by the gentry of England, as expressive of the best current practice of their class, and his ideas as to education were also of some influence in shaping the instruction of the non-conformist teachers in the academies there. His place in the history of education is also of some importance, as we shall point out later, for the disciplinary theory of education which he set forth. Still more, Locke later exerted a deep influence on the writings of Rousseau (chapter XXI), and hence helped materially to shape modern educational theory.



FIG. 124. JOHN LOCKE (1632–1704)

The new schools for the sons of the gentry. Both Montaigne and Locke, in their emphasis on the importance of a practical education for the social and political demands of a gentleman concerned with the affairs of the modern world, represent a still further reaction against the humanistic schools of the time than did the humanistic realists whom we have just considered. Still more, both are expressive of the attitude of the nobility and gentry of the time, who had almost deserted the schools as pedantic institutions of little value. France was then the great country of Europe, and French language, French political ideas, French manners, and French tutors found their way into all neighboring lands. A new social and political ideal was erected — that of the polished man of the world, who could speak French, had traveled, knew history and politics, law and geography, heraldry and genealogy, some mathematics and physics with their applications, could use the sword and ride, was adept in games and dancing, and was skilled in the practical affairs of life.

To give such training the French created numerous Academies in their cities. A writer of 1649 states that there were twelve such institutions at that time in Paris alone. Not infrequently some nobleman was at the head. Boys were first educated at home by tutors, and then sent to the Academy to be trained in riding, the *military arts, fortification*, mathematics, the modern languages,



FIG. 125. AN ACADEMIE DES ARMES
From an early eighteenth-century Parisian poster, advertising an Academy

and the many graces of a gentleman. The Englishman, John Evelyn, who was in France in 1644, thus describes the French Academies:

At the Palais Cardinal in Paris I frequently went to see them ride and exercise the Greate Horse, especially at tl e Academy of Monsieur du Plessis, and de Veau, whose scholes of that art are frequented by the Nobility; and here also young gentlemen are taught to fence, daunce, play on musiq, and something in fortifications and mathematics.

At Richelieu, near Tours, belongs an Academy where besides the exercise of the horse, armes, dauncing, etc., all the sciences are taught in the vulgar French by Professors stipendiated by the great Cardinal.

The Academy of Juilly included some study of physical science, mathematics, geography, heraldry, French history, Italian, and Spanish, besides the riding and gentlemanly arts.

In England the tutor in the home became the type form for the education of the sons of a gentleman, the boys frequently being *sent abroad to* complete their education. In German lands, *which in the* seventeenth century were in close sympathy with

French life and thought, Heidelberg being a center for the dissemination of French ideas, the French academy idea was copied, and what were called *Ritterakademieen* (knightly academies) were founded in the numerous court cities [1] for the education, along such lines, of the sons of the many grades of the German nobility. Between 1620 and 1780, before the rise of the German nationalistic movement which sought to replace French ideas by native German culture, was the great period of these German court schools, and during this period they bestowed on the sons of the German nobility the courtly and military education of the French academies. The education of the nobility was in consequence segregated from the intellectual life of other classes. "Gallants" and "pedants" were the respective outputs of the two types of schools.

III. SENSE REALISM

The new educational aims of this group. This represented a still further and more important step in advance than either of the preceding. In a very direct way sense realism in education was an outgrowth of the organizing work of Francis Bacon. Its aim was:

(1) To apply the same inductive method formulated by Bacon for the sciences to the work of education, with a view to organizing a general method which would greatly simplify the instructional process, reduce educational work to an organized system, and in consequence effect a great saving of time; and

(2) To replace the instruction in Latin by instruction in the vernacular,[2] and to substitute new scientific and social studies, deemed of greater value for a modern world, for the excessive devotion to linguistic studies.

The sixteenth century had been essentially a period of criticism in education, and the leading thinkers on education, as in other lines of intellectual activity, were not in the schools. In the seven-

[1] Unlike England and France, the German lands long remained feudal and not united. As late as the beginning of the nineteenth century Germany was made up of more than three hundred little principalities, of which sixty were free cities. Each little principality was self-governing and maintained its little court.

[2] Richard Mulcaster (1531–1611), for forty-eight years a famous London Latin grammar-school master, often classed as a precursor of the sense realists, in two books, published in 1581 and 1582, had urged the great importance of a study of the English tongue, and of using it as a medium for instruction. In his *Elementarie* (1582) he had said: "Our own language bears the joyful title of our liberty and freedom, the Latin remembers us of our thralldom and bondage. I love Rome, but London better; I favor Italy, but England more. I honor the Latin, but I worship the *English.*" *(R. 226.)*

teenth century we come to a new group of men who attempted to think out and work out in practice the ideas advanced by the critics of the preceding period. In the seventeenth century we have, in consequence, the first serious attempt to formulate an educational method since the days of the Athenian Greeks and the treatise of Quintilian.

The possibility of formulating an educational method that would simplify the educational process and save time in instruction, appealed to a number of thinkers, in different lands. This group of thinkers, due to their new methods of attack and thought, the German historian of education, Karl von Raumer, has called *Innovators*. The chief pedagogical ideas of the Innovators were:

1. That education should proceed from the simple to the complex, and the concrete to the abstract.
2. That things should come before rules.
3. That students should be taught to analyze, rather than to construct.
4. That each student should be taught to investigate for himself, rather than to accept or depend upon authority.
5. That only that should be memorized which is clearly understood and of real value.
6. That restraint and coercion should be replaced by interest in the studies taught.
7. That the vernacular should be used as the medium for all instruction.
8. That the study of real things should precede the study of words about things.
9. That the order and course of Nature be discovered, and that a method of teaching based on this then be worked out.
10. That physical education should be introduced for the sake of health, and not merely to teach gentlemanly sports.
11. That all should be provided with the opportunity for an education in the elements of knowledge. This to be in the vernacular.
12. That Latin and Greek be taught only to those likely to complete an education, and then through the medium of the mother tongue.
13. That a uniform and scientific method of instruction could be worked out, which would reduce education to a science and serve as a guide for teachers everywhere.

The Englishman, Francis Bacon, whom we have previously considered; the German, Wolfgang Ratichius (or Ratke); and the Moravian bishop and teacher, Johann Amos Comenius, stand as *perhaps the clearest* examples of this organizing tendency in education. *Ratke* and Comenius will be considered here as types.

Wolfgang Ratke. Bacon had believed that the new scientific knowledge should be incorporated into the instruction of the schools, and had suggested, in his *Advancement of Learning* (1603–05), a broader course of study for them, and better facilities for scientific investigation and teaching. While Bacon was not a teacher and did not write specifically on school instruction, his writings nevertheless deeply influenced many of those who followed his thinking.

The first writer to apply Bacon's ideas to education and to attempt to evolve a new method and a new course of instruction was a German, by the name of Wolfgang Ratke (1571–1635). While studying in England he had read Bacon's *Advancement of Learning*, and from Bacon's suggestions Ratke tried to work out a new method of instruction. This he offered, and with much secrecy, unsuccessfully for sale at various German courts. Finally he issued an "Address" to the princes of Germany, assembled at an Electoral Diet at Frankfurt-am-Main, in 1612. In this he told them of his new method, which followed Nature, and declared that it was "fraught with momentous consequences" for mankind. He claimed that he could:

1. By using the German language in the earlier years:
 (*a*) Bring about the use of one common language among the German people, and thus lay the basis for unity in government and religion;
 (*b*) Impart to children a knowledge of the useful arts and sciences.
2. Teach Latin, Greek, and Hebrew better, and in far less time, than had previously been required for one language only.

This method he offered to sell to the princes, and he would impart it only on the promise that it be not revealed to others. Two professors were appointed to examine Ratke, and they reported very favorably on his plan.

In 1617 Ratke published, in Leipzig, his *Methodus Nova*, which was the pioneer work on school method, and is Ratke's chief claim to mention here. In this he laid down the fundamental rules for teaching, as he had thought them out. They were as follows:

1. The order of Nature was to be sought and followed.
2. One thing at a time, and that mastered thoroughly.
3. Much repetition to insure retention.
4. Use of the mother tongue for all instruction, and the languages *to be taught through* it.

5. Everything to be taught without constraint. The teacher to teach, and the scholars to keep order and discipline.
6. No learning by heart. Much questioning and understanding.
7. Uniformity in books and methods a necessity.
8. Knowledge of things to precede words about things.
9. Individual experience and contact and inquiry to replace authority.

We see here the essentials of the Baconian ideas, as well as the foreshadowings of many other subsequent reforms in teaching method.

During the next half-dozen years Ratke was a much-interviewed person, as the idea of a more general education of the people, advanced by the Protestant reformers, had appealed strongly to the imagination of many of the German princes. Finally the necessary money was raised to establish an experimental school,[1] printing-presses were set up to print the necessary books, the people of the village of Köthen, in Anhalt, were ordered to send their children for instruction, and the school opened with Ratke in charge and amid great expectations and enthusiasm. A year and a half later the school had failed, through the bad management of Ratke and his inability to realize the extravagant hopes he had aroused, and he himself had been thrown into prison as an impostor by the princes. This ended Ratke's work. He is important chiefly for his pioneer work as the forerunner of the greatest educator of the seventeenth century.

Johann Amos Comenius. We now reach not only the greatest representative of sense realism, both in theory and practice, before the latter part of the eighteenth century, but also one of the commanding figures in the history of education. Comenius was born at Nivnitz, in Moravia, in 1592. As a member, pastor, and later bishop of the Moravian church, and as a follower of John Huss, he suffered greatly in the Catholic-Protestant warfare which raged over his native land during the period of the Thirty Years' War. His home twice plundered, his books and manuscripts twice burned, his wife and children murdered, and himself at times a fugitive and later an exile, Comenius gave his long life

[1] The school was opened with 433 boys and girls enrolled. It was divided into six classes. In the first three German only was used. In the first two classes the children were taught to read and write German, Genesis being the reading book of the second class. In the third class German grammar was studied. Music, religion, and the elements of arithmetic were also taught in these classes. In the fourth class Latin was begun, studying Terence, and Latin grammar was worked out from the constructions. In the sixth and highest class Greek was taught. A good education was to be given in six years, through the saving of time.

to the advancement of the interests of mankind through religion and learning. Driven from his home and country, he became a scholar of the world.

While a student at the University of Nassau, at the age of twenty, he read and was deeply impressed by the "Address" of Ratke. Bacon's *Novum Organum*, which appeared when he was twenty-eight, made a still deeper impression upon him. He seems to have been familiar also with the writings of the educational reformers of his time in all European lands. He traveled extensively, and maintained a large correspondence with the scholars of his time. He was master of a Latin school in Moravia from the age of twenty-two to twenty-four, when he was ordained as a pastor of the Moravian Church. Eight years later, in 1632, he was banished, with all Protestant ministers, from his native land, and while an exile for a time took charge of a school at Lissa, in Poland. Here he worked out, in practice, the great work on method which he later published. In 1638 he was invited to reform the schools of Sweden; in 1641 he visited England, in connection with a plan for the organization of all knowledge; he spent the next eight years working at school reform in Sweden; from 1650 to 1654 he was in charge of a school at Saros-Patak, in Hungary, where he worked out his famous textbooks for teaching language; he was consulted with reference to the presidency of Harvard College, in 1654; the same year he returned to Lissa, and once more lost his books and manuscripts and was made a homeless exile; and finally he found a patron and asylum in Amsterdam, where he died in 1671, at the age of seventy-nine. The verse beneath his portrait seems an especially appropriate commentary on his life.

Comenius and educational method. While teaching at Lissa, in Poland, Comenius had formulated for himself the principles underlying school instruction, as he saw it, in a lengthy book which he called *The Great Didactic*.[1] The title page (**R. 218**) and the table of contents (**R. 219**) will give an idea as to its scope. In this work Comenius formulated and explained his two fundamental ideas, namely, that all instruction must be carefully graded and arranged to follow the order of nature, and that, in imparting knowledge to children, the teacher must make constant

[1] This was written out in his native Czech tongue, but was not published at the time. A quarter of a century later it appeared in Latin, with his collected works, as published by his patron at Amsterdam (1657). It was then forgotten for two centuries. *In 1841 the manuscript* was found at Lissa, and published in the original *at Prague, in 1848.* The first English edition appeared in 1896.

appeal through sense-perception to the understanding of the child. We have here the fundamental ideas of Bacon applied to the school, and Comenius stands as the clearest exponent of sense realism in teaching up to his time, and for more than a century afterward.

Deeply religious by nature and training, Comenius held the Holy Scriptures to contain the beginning and end of all learning; to know God aright he held to be the highest aim; and with true Protestant fervor he contended that the education of every human being was a necessity if mankind was to enter into its religious inheritance, and piety, virtue, and learning were to be brought to their fruition. Unlike those who were enthusiasts for religious education only, Comenius saw further, and held an ideal of service to the State and Church here below for which proper training was needed. Still more, he believed in the education of human beings simply because they were human beings, and not merely for salvation, as Luther had held.

Comenius was the first to formulate a practicable school method, working along the new lines marked out by Bacon. He had no psychology to guide him, and worked largely by analogies from nature. A great idea with him was that we should study and follow nature, and this led him to the conclusions that education should proceed from the easy to the difficult, the near to the remote, the general to the special, and the known to the unknown, and that the great business of the teacher was imparting and guiding, and not storing the memory. These conclusions seem commonplaces to us of to-day, but what is commonplace to-day was genius three hundred years ago. To select the subject-matter of instruction carefully and on the basis of utility, to eliminate needless materials, not to attempt too much at a time, to use concrete examples, to have frequent repetitions to fix ideas, to advance by carefully graded steps, to tie new knowledge to old, to learn by observing and doing, and to learn by use rather than by precept — were still other of the present-day commonplaces which Comenius worked out and formulated in his *Didactica Magna*.[1] His plea for a mild and gentle discipline in place of the brutality of his time, his emphasis of the vernacular and the realities of life, his conception as to the importance of early education, his careful gradation of the school, and his ability to see the use-

[1] *See the English* edition edited by M. W. Keatinge, A. and C. Black, London. *1896.*



PLATE 3. JOHN AMOS COMENIUS (1592–1670)

The Moravian Bishop at the age of fifty. (After an engraving by Glover, printed as a frontispiece to Hartlib's *A Reformation of Schooles*. London, 1642.)



fulness of Latin without over-emphasizing its importance — all stamp him as a capable and practical schoolmaster who saw deeply into the nature of the educational process.

Comenius' ideas as to the organization of schools. In his *Didactica Magna* Comenius divided the school life of a child into four great divisions. The first concerned the period from infancy to the age of six, which he called The Mother School. For this period he wrote *The School of Infancy* (1628), a book intended primarily for parents, and one of such deep insight and fundamental importance that parents and teachers may still read it with interest and profit. In it he anticipated many of the ideas of the kindergarten of to-day. The next division was The Vernacular School, which covered the period from the ages of six to twelve. For this period six classes were to be provided, and the emphasis was to be on the mother tongue. This school was to be for all, of both sexes, and in it the basis of an education for life was to be given. It was to teach its pupils to read and write the mother tongue; enough arithmetic for the ordinary business of life, and the commonly used measures; to sing, and to know certain songs by rote; to know about the real things of life; the Catechism and the Bible; a general knowledge of history, and especially the creation, fall, and redemption of man; the elements of geography and astronomy; and a knowledge of the trades and occupations of life; all of which, says Comenius, can be taught better through the mother tongue than through the medium of the Latin and Greek. In scope this school corresponds with the vernacular school of modern Europe.

The next school was The Latin School, covering the years from twelve to eighteen, and in this German, Latin, Greek, and Hebrew were to be taught, by improved methods, and with physics and mathematics added. This school he divided into six classes, named from the principal study in each, as follows: (1) Grammar, (2) Physics, (3) Mathematics, (4) Ethics, (5) Dialectics, (6) Rhetoric. He also later outlined a plan for a six-class *Gymnasium* for Saros-Patak (**R. 220**), culminating in a seventh year for preparation for the ministry, which was an improvement on the Latin School and very modern in character. Had such a school become common, secondary education in Europe might have been a century in advance of where the nineteenth century found it. The Latin school was to be attended only by those of ability *who were likely to enter* the service of Church or State, or who

intended to pass on to the University. This last was to cover the period from eighteen to twenty-four. Unlike all educational practice of his time and later, Comenius here provides for an educational ladder of the present-day American type, wholly unlike the European two-class school system which (p. 353) later evolved.

Comenius' work in reforming language teaching. At the time Comenius lived and wrote, the languages constituted almost the only subject of study, and Latin grammar was the great introductory subject. The mediæval grammars (Donatus; Alexander de Villa Dei; pp. 156, 155) had been so poor that the instruction was difficult and, in consequence, long drawn out. Lily's Latin Grammar (p. 276), published in 1513, and Melanchthon's Latin Grammar, published in 1525, had represented marked advances. Still the subject remained difficult, even when taught from these new types of grammars. Comenius early became convinced, as a result of his teaching and studies in educational method, that the ancient classical authors were not only too difficult for boys beginning the study of Latin, but that they also did not contain the type of real knowledge he felt should be taught in the schools. He accordingly set to work to construct a series of introductory Latin readers which would form a graded introduction to the study of Latin, and which would also introduce the pupil to the type of world knowledge and scientific information he felt should be taught.

His plan eventually embraced a graded series of five books, as follows:

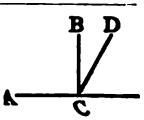
1. The *Orbis Sensualium Pictus*, or the World of Sense Objects Pictured. This was an illustrated primer and first reader, which appeared in 1658, and was the first illustrated book ever written for children (**R. 221**).

2. The *Vestibulum* (Vestibule, or gate). An easy first reader, consisting of but a few hundred of the most commonly used Latin words and sentences, with a translation into the vernacular in parallel columns. This book required about a half-year for its completion.

3. The *Janua Linguarum Reserta*, or Gate of Languages Unlocked. This was the first of the series printed (1631), the *Vestibulum* being an easy introduction to it, and the *Orbis Pictus* being the *Janua* simplified and illustrated. The *Janua* contained some eight thousand Latin words, arranged in simple sentences, with the vernacular equivalent in parallel columns; included information on a variety of subjects; [1] and

[1] The following is illustrative:

"Sec. 518 (Geometria). Ex concursu linearum fit angulus qui *est vel rectus, quem* linea incidens perpendicularis efficit, ut est *(in subjecto schemate)* angulus A C B; vel acutus, minor recto, *ut B C D; vel obtusus*, major recto, ut A C D."



was a regular Noah's Ark for vocabulary purposes. It embraced sufficient reading material and grammar for a year.

4. The *Atrium*. This was an expansion of the *Janua*, and treated the same topics more in detail. It was intended to be an advanced reader, based, as was the *Janua*, on studies about the real things of life. The vocabulary now was Latin-Latin, instead of Latin-vernacular.

5. The *Thesaurus*, which was never completed, but was planned to be a collection of graded extracts from easy Latin authors — Cornelius Nepos, Cæsar, Cicero, Sallust, Vergil, Horace, Pliny — to furnish the needed reading material for the three upper years of the Latin School.

The textbooks illustrated. Beginning in the *Janua*, and afterwards in the *Vestibulum* and *Orbis Pictus* as well, Comenius not only simplified the teaching of Latin by producing the best textbooks for instruction in the subject the world had ever known, but he also shifted the whole emphasis in instruction from words to things, and made the teaching of scientific knowledge and useful world information the keynote of his work. The hundred different chapters of the *Janua*, and the hundred and fifty-one chapters of the *Orbis Pictus*, were devoted to imparting information as to all kinds of useful subjects. The following selections from the chapter titles of the *Orbis Pictus* illustrate how large a place the new scientific studies occupied in his conception of the school:

The World	Birds	Weaving	Philosophy
The Heavens	Cattle	Tailor	Prudence
Fire	Fish	Barber	Diligence
Wind	Parts of Man	Schoolmaster	Temperance
Water	Flesh and Bowels	Shoemaker	Fortitude
Clouds	Chanels and Bones	Carpenter	Humanity
Earth	Senses	Potter	Justice
Fruits	Deformities	Printing	Consanguinity
Metals	Husbandry	Geometry	A City
Trees	Bees and Honey	The Planets	Merchandizing
Herbs	Butchery	Eclipses	A Burial
Flowers	Cookery	Europe	Religious Forms

The accompanying illustrations (Figs. 126, 127) reveal the nature of the text-books he prepared. (See also **R. 221** for four additional pages of illustrations from the *Orbis Pictus*.)

The success of these textbooks was immediate and very great. Within a short time after the publication of the *Janua* it had been translated into Flemish, Bohemian, English, French, German, Greek, Hungarian, Italian, Latin, Polish, Spanish, and Swedish, as well as into Arabic, Mongolian, Russian, and Turkish. The

The Barbers Shop. LXXV. *Tonſtrina.*



The Barber, 1.
in the Barbers-ſhop, 2.
cutteth off the Hair
and the Beard
with a pair of Sizzars, 3.
or ſhaveth with a Razor,
which he taketh out of his Caſe, 4.
And he waſheth one
over a Baſon, 5.
with Suds *running*
out of a Laver, 6.
and alſo with Sope, 7.
and wipeth him
with a Towel, 8.
combeth him with a Comb, 9.
and curleth him
with a Criſping Iron, 10.
Sometimes he cutteth a Vein
with a Pen-knife, 11.
where the Blood ſpirteth out, 12.

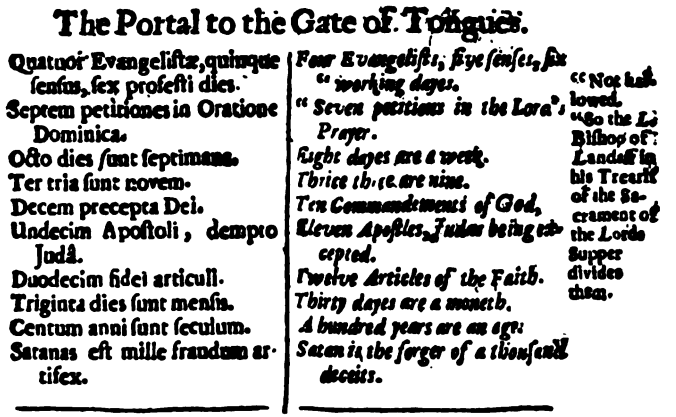
Tonſor, 1.
in *Tonſtrina*, 2.
tondet *Crines*
& *Barbam*
Forcipe, 3.
vel radit *Novaculâ*,
quam è *Theca*, 4. depromit.

Et lavat
ſuper *Pelvim*, 5.
Lixivio defluente
è *Gutturnio*, 6.
ut & *Sapone*, 7.
& tergit
Linteo, 8.
pectit *Pectine*, 9.
criſpat
Calamiſtro, 10.
Interdum Venam ſecat
Scalpello, 11.
ubi Sanguis propullulat, 12.

The

FIG. 126. A SAMPLE PAGE FROM THE "ORBIS PICTUS"
The illustration and Latin text is from the first edition of 1658; the *English* translation from the English edition of 1727

Orbis Pictus was an even greater success.[1] It went through many editions, in many languages; stood without a competitor in Europe for a hundred and fifteen years; and was used as an introductory textbook for nearly two hundred years. An American edition was brought out in New York City, as late as 1810.



The Portal to the Gate of Tongues.

Quatuor Evangeliſtæ, quinque ſenſus, ſex profeſti dies.
Septem petitiones in Oratione Dominica.
Octo dies ſunt ſeptimanæ.
Ter tria ſunt novem.
Decem precepta Dei.
Undecim Apoſtoli, dempto Judâ.
Duodecim fidei articuli.
Triginta dies ſunt menſis.
Centum anni ſunt ſeculum.
Satanas eſt mille fraudum artifex.

Four Evangeliſts, five ſenſes, ſix "working days.
"Seven petitions in the Lord's Prayer.
Eight dayes are a week.
Thrice three are nine.
Ten Commandements of God,
Eleven Apoſtles, Judas being excepted.
Twelve Articles of the Faith.
Thirty dayes are a moneth.
A hundred years are an age.
Satan is the forger of a thouſand deceits.

"Not followed. "So the Lo. Biſhop of Landaff in his Treatiſe of the Sacrament of the Lords Supper divides them.

FIG. 127. PART OF A PAGE FROM A LATIN-ENGLISH EDITION OF THE "VESTIBULUM"

Thousands of parents, who knew nothing of Comenius and cared nothing for his educational ideas, bought the book for their children because they found that they liked the pictures and learned the language easily from it.[2]

Place and influence of Comenius. Comenius stands in the history of education in a position of commanding importance. He introduces the whole modern conception of the educational process, and outlines many of the modern movements for the improvement of educational procedure. What Petrarch was to the revival of learning, what Wycliffe was to religious thought, what Copernicus was to modern science, and what Bacon and Descartes were to modern philosophy, Comenius was to educational practice and thinking (**R. 222**). The germ of almost all eighteenth- and nineteenth-century educational theory is to be found in his work, and he, more than any one before him and for at least two centuries after him, made an earnest effort to introduce the

[1] A very good reprint of the 1727 English edition, with pictures from the first edition of 1658, was brought out by C. W. Bardeen, of Syracuse, New York, in 1887. This ought to be in all libraries where the history of education is taught.

[2] Basedow's *Elementarwerk mit Kupfern* (Elementary Reading Book, with copperplate pictures), published in 1773 (see p. 535), was the first attempt, and not a particularly *successful one either*, to improve on the Orbis Pictus.

new science studies into the school. Far more liberal than his Lutheran or Calvinistic or Anglican or Catholic contemporaries, he planned his school for the education of youth in religion and learning and to fit them for the needs of a modern world. Unlike the textbooks of his time, and for more than a century afterward, his were free from either sectarian bigotry or the intense and gloomy atmosphere of the age.

Yet Comenius lived at an unfortunate period in the history of human progress. The early part of the seventeenth century was not a time when an enthusiastic and aggressive and liberal-minded reformer could expect much of a hearing anywhere in western Europe. The shock of the contest into which western Christendom had been plunged by the challenge of Luther had been felt in every corner of Europe, and the culmination of a century of warfare was then raging, with all the bitterness and brutality that a religious motive develops. Christian Europe was too filled with an atmosphere of suspicion and distrust and hatred to be in any mood to consider reforms for the improvement of the education of mankind. As a result the far-reaching changes in method formulated by Comenius made but slight impression on his contemporaries; his attempt to introduce scientific studies awakened suspicion, rather than interest; and the new method which he formulated in his *Great Didactic* was ignored and the book itself was forgotten for centuries. His great influence on educational progress was through the reform his textbooks worked in the teaching of Latin, and the slow infiltration into the schools of the scientific ideas they contained. As a result, many of the fundamentally sound reforms for which he stood had to be worked out anew in the nineteenth century. It is sad to contemplate how far our western world might have been advanced in its educational organization and scientific progress, by the close of the eighteenth century, had it been in a mood to receive and utilize the reforms in aims and methods, and to accept the new scientific subject-matter, proposed and worked out by this far-sighted Moravian teacher. Religious bigotry has, in all lands and ages, proved itself one of the most serious of all obstacles in the path of human progress.

IV. REALISM AND THE SCHOOLS

The vernacular schools. The ideas for which the realists just described had stood were adopted in the people's schools but

slowly, and came only after long waiting. The final incorporation of science instruction into elementary education did not come until the nineteenth century, and then was an outgrowth of the reform work of Pestalozzi on the one hand, and the new social, political, economic, and industrial forces of a modern world on the other.

The Peace of Westphalia (1648), which closed a century of bitter and vindictive religious warfare, was followed by another century of hatred, suspicion, and narrow religious intolerance and reaction. All parties now adopted an extremely conservative attitude in matters of religion and education, and the protection of orthodoxy became the chief purpose of the school. Reading, religion, a little counting and writing, and, in Teutonic lands, music, came to constitute the curriculum of such elementary vernacular schools as had come to exist, and the religious Primer and the Bible became the great school textbooks. The people were poor, much of Europe was impoverished and depopulated as a result of long-continued religious strife, the common people still occupied a very low social position, there were as yet no qualified teachers, and no need for general education aside from religion. Still more, during more than a thousand years the Church had established the tradition of providing free education, and when the governing authorities of the States which turned to Protestantism had taken from the Church both the opportunity to continue the schools and the wealth with which to maintain them, they were seldom willing to tax themselves to set up institutions to continue the work formerly done *gratis* by the Church. In consequence, regardless of Protestant educational theory as to the need for general education, but little progress in providing vernacular schools was made during the whole of the seventeenth and eighteenth centuries.

Here and there in Teutonic lands, however, the new studies found an occasional patron. In 1619 schools were organized for the little Duchy of Weimar (p. 317) by a pupil of Ratke, and sense realism was given a place in them. The schoolmaster, Andreas Rayher, who in 1642 drew up the *Schule Methodus* for Duke Ernest of Saxe-Gotha and Altenburg, was familiar with the work of both Ratke and Comenius, and made provision for instruction in "the natural and useful sciences" (R. 163) for Duke Ernest's children. Here and there a few other attempts to provide schools and add instruction in the new Realien were made.

The number of such attempts was not large, but their work was influential, and as a result vernacular schools and science instruction finally became established among German-speaking peoples before they did in any other land.

The secondary schools. The influence of Milton's *Tractate* on the non-conformist Academies of England has been traced, and the transfer of the idea of instruction in the new mathematical, scientific, literary, historical, and political subjects to the new American Academies has been mentioned. That these new studies also entered into the education of a gentleman in England and France, under the private-tutor and the courtly-academy system, and were copied from the French and constituted a large part of the instruction organized for the *Ritterakademieen* of the numerous court cities in German lands, has also been mentioned. In both England and France such private instruction exerted but little influence on the existing Latin grammar schools, and in consequence the schools of both countries remained largely unchanged in direction and purpose until the second half of the nineteenth century. In German lands the *Ritterakademieen* idea experienced a further development, which proved to be of large importance for the future of German education.

Francke's "Institutions." With the introduction of French ideas and training into the German courts, French skepticism in matters of religion developed in the court circles. Under the influence of a pious Lutheran clergyman, Philip Spener (1635–1705), who tried to emphasize religion as an affair of the heart rather than the head; and especially as a result of the work of his spiritual successor, Augustus Hermann Francke, a movement arose in German lands, during the closing years of the seventeenth century, which became known as *Pietism.*[1] Disgusted with the lifeless and insincere religion of the time, these two strove to substitute a religion of both head and heart. In 1695, moved by pity for the poor, Francke established at Halle the first of his famous "Institutions," — a school for poor children. A pay school for the well-to-do was soon added, and soon another school for the children of nobility. An orphan school also was in time provided. The school for the poor developed into a vernacular or *Burgher* (*volks;* peoples) school; the school for the pay pupils into a Latin School, or *Gymnasium;* and the school for

[1] *This term was at first* applied in derision, just as Methodism was applied to the *English religious reformers* in the eighteenth century, but the term was soon made *reputable by the* earnestness and ability of those who accepted it.

nobles into a higher scientific school, or *Pädagogium* as it was called. At first Francke encountered some theological opposition, but the "Institutions" prospered, and at the time of his death contained over 2200 pupils, and over 300 teachers, workers, and attendants.

The interesting thing about Francke's work was the courses of instruction he provided for his schools.[1] In the Burgher School he gave the children instruction in history, geography, and animal life, in addition to the reading, writing, counting, music, and religion of the usual German vernacular school. Into the *Gymnasium* he introduced instruction in history, geography, music, science, and mathematics, in addition to the usual Latin, Greek, and Hebrew. He also changed the purpose of the language instruction. Greek was studied to be able to read the New Testament in the original, and Hebrew better to understand the Old. The *Pädagogium* was provided with a botanical garden, a cabinet of natural history, physical apparatus, a laboratory for the study of chemistry and anatomy, and a workshop for turning and glass-cutting. Independent of the work of Comenius, but as an outgrowth of the new movement for the study of science now beginning to influence educational thought, we have here the most important attempt at the introduction into the school of sense realism, or *Realien*, as the Germans say, that the modern world had so far witnessed. In 1697 Francke added a *Seminarium Præceptorium*, to train teachers in his new ideas. This was the first teachers' training-school in German lands, and the teachers he trained served to scatter his educational ideas over the German States.[2]



FIG. 128. AUGUSTUS HERMANN FRANCKE (1663–1727)

[1] Francke's father had been counselor to Duke Ernest of Gotha, who had created for his little duchy the most modern-type school system of the seventeenth century. How much Francke's progressive ideas in educational matters go back to the work of Duke Ernest forms an interesting speculation.

[2] "Francke had the rare ability to see clearly what needed doing, and then to do it regardless of obstacles or consequences. The magnitude of his work in Halle is simply marvelous, and yet what he actually accomplished is insignificant in comparison with what he inspired others to do. He showed how practical Christianity could be incorporated in the work of the common schools; his plan was immediately adopted by Frederick William I and made well-nigh universal in Prussia. He

The first Realschule. Associated with Francke as a teacher was one Christopher Semler (1669–1740), who became deeply interested in the new studies of the secondary school. In 1706 Semler had submitted a plan to the government of Magdeburg for the teaching of the practical studies. This was referred to the Berlin Society of Sciences, which approved the plan, and later elected Semler to membership in the Society. For years Semler continued as a teacher at Halle, but without carrying the idea far enough to create a new type of school. In 1739 Semler published a paper "Upon the Mathematical, Mechanical, and Agricultural Real School in the City of Halle," in which he described the instruction given there. This was probably the first use of the term "real school" (*Realschule*). The important subjects described as taught, aside from religion, were "the useful and in daily life wholly indispensable sciences," such as mathematics, drawing, geography, history, natural history, agriculture, and economics, with much emphasis on observation by the pupils.

The work at Halle soon stimulated complaints as to the existing Latin schools, where children, destined for business or the service of the State, were kept trying to learn Latin, "to the neglect of more practical and more useful studies." The usefulness of the new *real* studies now began to be more correctly estimated, and the conviction gradually grew that those boys who were destined for trade — now a rapidly increasing number — should not be obliged to follow the same course as those destined to be scholars. In 1720 Rector Gesner, of the gymnasium at Rotenburg, wrote, rather sarcastically:

> The one class, who will not study, but will become tradesmen, merchants, or soldiers, must be instructed in writing, arithmetic, writing letters, geography, description of the world, and history. The other class may be trained for studying.

In 1742 the Rector at Dresden, Schöttgau, issued a "Humble proposal for the special class in public city schools" to provide for those children "who are to remain without (that is, cannot learn) Latin." Instead of forcing them to attempt to learn Donatus, which he said was useless for them, he urged that a special class (school) be organized to train them to become useful merchants,

showed how the *Realien* could be profitably employed in a Latin school, and even made a constituent part of a university preparatory course; as a result of his methods, and especially of his suggestion that schools should be founded for the exclusive purpose of fitting the youth of the citizen class for practical life, there has since grown up in Germany a class of *Real*-schools." (Russell, J. E., *German Higher Schools, p. 64.)*

artists, and mechanics. In 1751 Rector Henzky, of Prenzlau, issued a treatise to show "That Real schools can and must become common." In 1756 Gesner, professor at the new University of Göttingen, in a pamphlet "On the organization of a gymnasium" (**R. 223**), urged that there were three classes of youths for whom schools should be provided, one of which needed the *Realschule*.

In 1747 a clergyman by the name of Julius Hecker (1707–1768), who had been a pupil in, and later had taught in Francke's "Institutions," went to Berlin and opened there the first distinct German *Realschule*. In this school Hecker provided instruction in religion, ethics, German, French, Latin, mathematics, drawing, history, geography, mechanics, architecture, and a knowledge of nature and of the human body. Classes were organized in architecture, agriculture, bookkeeping, manufacturing, and mining. The school prospered from the first, and in time became the "Royal *Realschule*" of Berlin. In answer to a growing demand for advanced education for that constantly increasing number of youths destined for the trades or a mercantile career, the *realschule* idea was copied in a number of the important cities of Germany. Thus early — a century in advance of other nations, and a century and a quarter ahead of the United States — did Prussia lay the foundations of that scientific and technical education which, later on, did so much toward creating modern industrial Germany.

The universities and the new scientific learning. Though the theological persecution of scientific workers largely died out after about the middle of the seventeenth century, and was never much of a factor in lands which had embraced some form of Protestantism, the new sciences nevertheless made but little headway in the universities until after the beginning of the eighteenth century. Up to the close of the seventeenth century the universities in all lands continued to be dominated by their theological faculties, and instruction still remained largely encompassed by mediævalism. England represents perhaps the most notable exception to this statement, scientific studies having been received with greater tolerance by the universities there than in other lands. In both Catholic and Protestant lands the need was felt for orthodox training, through fear of further heresy, and many petty restrictions were thrown about study and teaching which were stifling to free thinking and investigation. Each little King-

dom or State now took over the supervision of some old university within its borders, or established a new one, that it might more completely control orthodoxy and prepare its own civil servants. Of the seventeenth century, Paulsen [1] well says:

> It was essentially the period of the territorial-confessional university, and is characterized by a preponderance of theological-confessional interest. . . . Many new foundations, both Catholic and Protestant, now appeared. The chief impetus leading to these numerous foundations was the accentuation of the principle of territorial sovereignty, from the ecclesiastical as well as the political point of view. The consequence was that the universities began to be *instrumentia denominationis* of the government as professional schools for its ecclesiastical and secular officials. Each individual government endeavored to secure its own university in order — (1) to make sure of wholesome instruction, which meant, of course, instruction in harmony with the confessional standards of its established church; (2) to retain training of its secular officials in its own hands; and finally (3) render attendance at foreign universities unnecessary on the part of its subjects, and thus keep the money in the country.
>
> Large amounts of money were not needed to establish a new university. A few thousand guilders or thalers sufficed for the salaries of ten or fifteen professors, a couple of preachers and physicians would undertake the theological and medical lectures, and some old monastery would supply the needed buildings.

After the Reformation the law faculty increased to the place of first importance in Protestant lands, because the Reformation had created a new demand for judges and higher court officials to replace the rule of the clergy. The medical faculty continued to be, as in the mediæval universities, the smallest of all the faculties and amounted to little before the nineteenth century.[2] The arts faculty, or philosophical as it came to be termed in German lands, offered lectures in Latin, Greek, and Hebrew, and a general course in philosophy, but the Aristotelian texts and to some extent mediæval methods in instruction continued to be used until the beginning of the eighteenth century.

Here and there some professor "read" on mathematics, and in Protestant lands on the new astronomy, and the study of botany began as the study of herbs in the medical faculty,[3] but during

[1] Paulsen, Fr., *The German Universities*, p. 36.

[2] As late as 1805, according to Paulsen, of the whole number of students in the universities of Prussia, there were but 144 in the combined medical faculties, as against 555 in theology, and 1036 in law.

[3] Francke relates that, as a student at Erfurt (c. 1675), he was able to study *physics and botany, along* with his theological studies. Oxford records show the *publication of a list of* plants in the "Physick Garden" there as early as 1648. The *garden was endowed* about that time by the Earl of Danby, and in 1764 lectures on

the sixteenth and seventeenth centuries few professors or students were interested in the scientific subjects. By 1675 Bacon's *Novum Organum* had begun to be taught at both Oxford and Cambridge, and by 1700 the Newtonian physics had begun to displace Aristotle at Oxford. By 1740 it was well established there. At first instruction in the new subjects was offered as an extra and for a fee by men not having professional rank (**R. 224**), and later the instruction was given full recognition by the university. By 1700 Cambridge had become a centèr for mathematical study (**R. 225**), and with the growth in popularity of the Newtonian philosophy, mathematical studies there took the place held by logic in the mediæval university. Cambridge has ever since remained a center for mathematical and, since the beginning of the nineteenth century, for scientific studies as well. Between 1680 and 1700 the University of Paris was reformed, and the mathematical and philosophical studies of Descartes (p. 394) began to be taught there. The universities of the Netherlands began to teach the new mathematical and scientific studies even earlier.

Aside from the above described *Realschule* development, the new scientific movement for a time largely passed over German lands, and in consequence the German universities remained unreformed until the eighteenth century. During the seventeenth century they sank to their lowest intellectual level. In 1694, largely in protest against the narrowness of the old universities, the new University of Halle was founded. It received into its faculty certain forward-looking men who had been driven from the old universities,[1] and is generally considered as the first modern university. The new scientific and mathematical subjects and a reformed philosophy were introduced; the instruction in Greek and Latin was reformed; German was made the medium of classroom instruction; and a scientific magazine in German was begun. In 1737 the University of Göttingen became a second center of modern influence, and from these two institutions the new scientific spirit gradually spread to all the Protestant univer-

botany were begun there. Lord Bacon, in his *Advancement of Learning* (1605), had written: "We see likewise that some places instituted for physic (medicinæ) have annexed the commodity of gardens for simples of all sorts, and do likewise command the use of dead bodies for anatomies."

[1] Thomasius was made professor of theology, and Francke professor of Greek and Oriental languages. Both had been expelled from the University of Leipzig. Christian Wolff, who had been banished by Frederick William I, was recalled and made *professor of philosophy*. It was he who "made philosophy talk German."

sities of German lands. A century later they were the leading universities of the world.

The transition now practically complete. From the time Petrarch made his first "find" at Liège (1333), in the form of two previously unknown orations of Cicero (p. 244), to the publication of the *Principia* (p. 388) of Newton (1687), is a period of approximately three and a half centuries. During these three and a half centuries a complete transformation of world-life had been effected, and the mediæval man, with his eyes on the past, had given place to the modern man with his eyes on the future. During these three and a half centuries revolutionary forces had been at work in the world of ideas, and the transition from mediæval to modern attitudes had been accomplished. From 1333 to 1433 was the century of "literary finds," and during this period the monastic treasures were brought to light and edited and the classical literature of Rome restored. Greek also was restored to the western world, and a reformed Latin, Greek, and Hebrew were given the place of first importance in the new humanistic school. The invention of printing took place in 1423; 1456 witnessed the appearance of the first printed book, and the perfection of the new means for the multiplication of books and the dissemination of ideas. Before 1500 the great era of geographical discovery had been inaugurated; a sea-route to India was found in 1487; and a new continent in 1492. In 1519–22 Magellan's ships rounded the world.

In 1517 Luther issued the challenge, the shock of which was felt in every corner of Christian Europe, and within a half-century much of northern and western Europe had been lost to the original Roman Church. Soon independence in thinking had been extended to the problem of the organization of the universe, and in 1543 Copernicus issued the book that clearly marks the beginning of modern scientific thinking and inquiry. Bacon had done his organizing work by 1620, and Newton's *Principia* (1687) finally established modern scientific thought and work. Comenius died in 1671, his great organizing work done, and his textbooks, with their many new educational ideas, in use all over Europe. The mediæval attitude still continued in religion and government, but the world as a whole had left mediæval attitudes behind it, and was facing the future of modern world organization *and life. To the* educational organization of this modern world *we now turn, though* before doing so we shall try to present a

cross-section, as it were, of the development in educational theory and practice which had been attained by about the middle of the eighteenth century.

QUESTIONS FOR DISCUSSION

1. Explain why the scholars of the time were so intent on producing a new race of Roman youths for a revived Latin scholarly world.
2. Show that a reaction against humanism was certain to arise, and why.
3. How do you explain the very small influence exerted on the Latin grammar schools of England by the non-conformist Academies, after they had been absorbed into the existing English non-state system of higher schools?
4. Compare Milton and Montaigne.
5. What would be the most probable effect on education of the erection of the polished-man-of-the-world ideal?
6. Enumerate the forces favoring and opposing the change of the language of instruction from Latin to the vernacular.
7. How many of the thirteen principles of the Innovators do we still hold to be valid?
8. Just what was new in the nine fundamental rules laid down by Ratke, in his *Methodus Nova?*
9. What is your estimate of the vernacular schools as outlined by Comenius? Of the plans for a gymnasium at Saros-Patak?
10. Compare Comenius' Latin school with the College of Calvin (p. 330).
11. State the new ideas in instruction embodied in the textbooks of Comenius.
12. Show that Comenius dominates modern educational ideas, even though his work was largely lost, in the same way that Petrarch or Wycliffe or Copernicus do modern work in their fields.
13. Explain the very slow development of vernacular schools after the Protestant Revolts.
14. Why would the introduction of *real* studies into them be especially slow?
15. What explanation can you offer for the much earlier beginnings in scientific instruction in German lands than in England or America, when much more of the important early scientific work was done by Englishmen than by Germans? and the failure of science for a time to find a home in the German universities?
16. Explain the continued dominance of the theological faculty in the universities of the seventeenth century.

SELECTED READINGS

In the accompanying *Book of Readings* the following illustrative selections are reproduced:

210. Rabelais: On the Nature of Education.
211. Milton: The Aim and Purpose of Education.
212. Milton: His Program for Study.
213. Adamson: Discontent of the Nobility with the Schools.
214. Montaigne: Ridicule of the Humanistic Pedants.
215. Montaigne: His Conception of Education.
216. Locke: Extracts from his Thoughts on Education.
217. Locke: Plan for Working Schools for Poor Children.
218. *Comenius: Title-Page of the Great Didactic.*

219. Comenius: Contents of the *Great Didactic*.
220. Comenius: Plan for the Gymnasium at Saros-Patak.
221. Comenius: Sample pages from the *Orbis Pictus*.
(*a*) A page from a Latin-German edition of 1740.
(*b*) Two pages from a Latin-English edition of 1727.
(*c*) A page from the New York edition of 1810.
222. Butler: Place of Comenius in the History of Education.
223. Gesner: Need for *Realschulen* for the New Classes to be Educated.
224. Handbill: How the Scientific Studies began at Cambridge.
225. Green: Cambridge Scheme of Study of 1707.

QUESTIONS ON THE READINGS

1. Show that Rabelais (**210**) was in close sympathy with the best of the new humanists of his age.
2. Would Milton's definition of the purpose of education (**211**) be true, still?
3. Show from Milton's program of studies (**212**) that he represents a transition type, and also that his program contains the nucleus of the more modern studies of the secondary school.
4. Explain the discontent of the nobility (**213**) with the existing Church schools.
5. Assuming Montaigne's description of the education of his time (**214**) to be true, explain why this might naturally be the case.
6. Just what kind of an education does Montaigne outline (**215**), and how great a reaction was this from existing conditions?
7. In how far would Locke's ideas (**216**) still apply to the education of a boy of the leisure class?
8. Show that Locke's plan for work-house schools (**217**) was in thorough accord with English post-Reformation ideas as to the duty of the State in matters of education, and also that it contained the beginnings of the pauper-school idea of education which we later had to combat.
9. From the title-page (**218**) and the table of contents (**219**) of Comenius' *Great Didactic*, point out the originality and novelty of his ideas.
10. Compare Comenius' plan for the Saros-Patak *Gymnasium* (**220**) with such schools as Sturm's (**137**), the college of Guyenne (**136**), the college of Calvin (**175**), and the Jesuits (p. 340).
11. Compare Comenius' plan (**220**) with the instruction in an American high school of seventy-five years ago.
12. Compare the Alphabet page of Comenius' *Orbis Pictus* (**221**) with the same page in the *New England Primer* (**202**).
13. When so many educational reforms were inaugurated so early by Comenius (**222**), explain their neglect, and our having to work them out anew in the nineteenth century.
14. What does the need for *Realschulen* (**223**) indicate as to the evolution of German society and the recuperation from the ravages of war?
15. Compare the beginnings of scientific study at Cambridge (**224**) with beginnings of new subjects to-day in our schools.
16. Just what does the Cambridge Scheme of Study (**225**) indicate as being taught there?

SUPPLEMENTARY REFERENCES

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CHAPTER XVIII

THEORY AND PRACTICE BY THE MIDDLE OF THE EIGHTEENTH CENTURY

WE have now reached, in our history of the transition age which began with the Revival of Learning — the great events of which were the recovery of the ancient learning, the rediscovery of the historic past, the reawakening of scholarship, and the rise of religious and scientific inquiry — the end of the transition period, and we are now ready to pass to a study of the development and progress of education in modern times. Before doing so, however, we desire to gather up and state the progress in both educational theory and practice which had been attained by the end of this transition period, and to present, as it were, a cross-section of education at about the middle of the eighteenth century. To do this, then, before passing to a consideration of educational development in modern times, will be the purpose of this chapter. We shall first review the progress made in evolving a theory as to the educational purpose, and then present a cross-section view of the schools of the time under consideration.

I. PRE-EIGHTEENTH-CENTURY EDUCATIONAL THEORIES

The state purpose of the Greeks and Romans. As we saw, early in our study of the rise and progress of the education of peoples, the City-States of Greece were the first consciously to evolve a systematic plan of schooling and a prolonged course of training for those who were to guide and direct the State. In Sparta the training was almost wholly for military efficiency and tribal safety, but in Athens we found a people using a well-worked-out system of training to develop individual initiative, advance civilization, and promote the welfare of the State. The education provided was for but a class, to be sure, and a small ruling class at that, but it was the first evidence of the new western, individualistic, and democratic spirit expressing itself in the education of the young. There also we found, for the first time, the thinkers of the State deeply concerned with the education of the youth of the *State, and viewing* education as a necessity to make life worth *living and to secure* the State from dangers, both without and

within. The training there given produced wonderful results, and for two centuries the men educated by it ably guided the destinies of Athens.

The essentials of this Greek training were later embodied in the private-adventure school system that arose in Rome, which was adapted to conditions and needs there, and which was used for the training of a few Roman youths of the wealthier families for a political career. Schooling at Rome, though, never attained the importance or rendered the service that characterized education at Athens, and never became an instrument of the State used consciously for State ends. One Roman writer, Quintilian, as we have seen (**R. 25**), worked out a careful statement of the whole process of educating a youth for a public career, and this, the first practical treatise on education, was for long highly prized as the best-written statement of the educational art.

The future-life conception of the Christians. With the decline of Roman power and influence, and the victory of Christianity throughout the Roman world, the State conception of education was entirely lost to western Europe, and more than a thousand years elapsed before it again arose in the western world. The Church now became the State, and the need for any education for secular life almost entirely passed away. For centuries the aim was almost entirely a preparation for life in the world to come. Throughout all the early Middle Ages this attitude continued, supplemented only by the meager education of a few to carry on the work of the Church here below.

After the tenth century we noted the rise of some more or less independent study in some of the monastery and cathedral schools, and after the twelfth century the rise of *studia generalia* marked the congregation into groups of the few interested in a studious life. These in turn gave rise to the university foundations, and to the beginning of independent and secular study once more in the western world. The Revival of Learning, the recovery of the ancient manuscripts, the revival of the study of Greek in the West, the founding of libraries, the invention of paper and printing, and the revival of trade and commerce — all were new forces tending to give a new direction to scholarly study, and as a result a new race of scholars, more or less independent of the Church, now arose in western Europe. They were, however, a class, and a very small class at that, and though the result of their work was the creation of a new humanistic secondary school,

this still ministered to the needs of but a few. This few was intended either for the service of the Church, for the governmental service of the towns which had by this time attained their independence, or for the governments of the rising principalities or states.

For the great mass of the people, whose purpose in life was to work and believe and obey, agriculture, warfare, the rising trades with their guilds (p. 209), and the services of the Church (p. 121) constituted almost all in the way of education which they ever received. To be useful to his overlord and master here and to be saved hereafter were the chief life-purposes of the common man. The former he must himself undertake in order to be able to live at all; the latter the Church undertook to supply to those who followed her teachings.

The rise of the vernacular religious school. For the first time in history, if we except the schools of the early Christian period, the Protestant Revolts created a demand for some form of an elementary religious school for all. The Protestant theory as to personal *versus* collective salvation involved as a consequence the idea of the education of all in the essentials of the Christian faith and doctrine. The aim was the same as before — personal salvation — but the method was now changed from that of the Church as intermediary to personal knowledge and faith and effort. To be saved, one must know something of the Word of God, and this necessitated instruction. To this end, in theory at least, schools had to be established to educate the young for membership in the new type of Church relationship. Reading the vernacular, a little counting and writing, in Teutonic countries a little music, and careful instruction in a religious Primer (**R. 202**), the Catechism, and the Bible, now came to constitute the subject matter of a new vernacular school for the children of Protestants, and to a certain extent in time for the children of Catholics as well. As we pointed out earlier (p. 353), between this new type of school for religious ends and the older Latin grammar school for scholarly purposes there was almost no relationship, and the two developed wholly independently of one another. In the Latin grammar schools one studied to become a scholar and a leader in the political or ecclesiastical world; in the vernacular religious school one learned to read that he might be able to read the Catechism and the Bible, and to know the will of the Heavenly Father. There was scarcely any other purpose to the maintenance of the ele-

mentary vernacular schools. This condition continued until well into the eighteenth century.

Early unsuccessful educational reformers. Back in the seventeenth century, as we have pointed out in the preceding chapter, a very earnest effort was made by Ratke and Comenius to introduce a larger conception of the educational process into the ele-



FIG. 129. A FRENCH SCHOOL BEFORE THE REVOLUTION
(After an etching by Boisseau, 1730–1809)

mentary vernacular school, to eliminate the gloomy religious material from the textbooks, to substitute a human-welfare purpose for the exclusively life-beyond view, and to transform the school into an institution for imparting both learning and religion. Comenius in particular hoped to make of the new elementary religious school a potent instrument for human progress by introducing new subject-matter, and by formulating laws and developing methods for its work which would be in harmony with the new scientific procedure so well stated by Francis Bacon. Comenius stands as the commanding figure in seventeenth-century pedagogical thought. He reasoned out and introduced us to the whole modern conception of the educational process and purpose (p. 415), and gave to the school of the people a solid theoretical and practical basis. Living, though, at an unfortunate period in human history, he was able to awaken little interest either in ra-

tional teaching-method or in reforms looking to the advancement of the welfare of mankind. Instead he roused suspicion and distrust by the innovations and progressive reforms he proposed; his now-celebrated book on teaching method (**Rs. 218, 219**) was not at the time understood and was for long forgotten, while the fundamentally sound ideas and pedagogical reforms which he proposed and introduced were lost amid the hatreds of his time, and had to be worked out again and reëstablished in a later and a more tolerant age.

Another unsuccessful reformer of some importance, and one whose work antedated that of both Ratke and Comenius, was the London schoolmaster, Richard Mulcaster (1531–1611), for twenty-five years headmaster of the famous Merchant Taylors' School (p. 278), and later Master of Saint Paul's School (p. 275). In 1581 he issued his *Positions*, a pedagogical work so far in advance of his time, and written in such a heavy and affected style, that it passed almost unnoticed in England, and did not become known at all in other lands. Yet the things he stood for became the fundamental ideas of nineteenth-century educational thought. These were:

1. That the end and aim of education is to develop the body and the faculties of the mind, and to help nature to perfection.
2. That all teaching processes should be adapted to the pupil taught.
3. That the first stage in learning is of large importance, and requires high skill on the part of the teacher.
4. That the thing to be learned is of less importance than the pupil learning.
5. That proper brain development demands that pressure and one-sided education alike be avoided.
6. That the mother tongue should be taught first and well, and should be the language of the school from six to twelve.
7. That music and drawing should be taught.
8. That reading and writing at least should be the common right of all, and that girls should be given equal opportunity with boys.
9. That training colleges for teachers should be established and maintained.

The modern nature of many of Mulcaster's proposals may be seen from the table of contents of his volume (**R. 226**). Mulcaster, like Comenius, thought far in advance of his age, and in consequence his book was soon and for long forgotten. Yet what *Quick* [1] *says of him* is very true:

[1] *Quick, R. H, Essays on Educational* Reformers, 2d ed., p. 97.

It would have been a vast gain to all Europe if Mulcaster had been followed instead of Sturm. He was one of the earliest advocates of the use of the vernacular instead of Latin, and good reading and writing in English were to be secured before Latin was begun. His elementary course included five things: English reading, English writing, drawing, singing, playing a musical instrument. If this were made to occupy the school time up to twelve, Mulcaster held that more would be done between twelve and sixteen than between seven and seventeen in the ordinary (Latin grammar school) way. There would be a further gain in that the children would not be set against learning.

John Locke, and the disciplinary theory of education. Another commanding figure in seventeenth-century pedagogical thought was the English scholar, philosopher, teacher, physician, and political writer, John Locke (1632–1704). In the preceding chapter we pointed out the place of Locke as a writer on the education of the sons of the English gentry, and illustrated by an extract from his *Thoughts* (**R. 216**) the importance he placed on such a practical type of education as would prepare a gentleman's son for the social and political demands of a world fast becoming modern. Locke's place in the history of education, though, is of much more importance than was there (p. 402) indicated. Locke was essentially the founder of modern psychology, based on the application of the methods of modern scientific investigation to a study of the mind,[1] and he is also of importance in the history of educational thought as having set forth, at some length and with much detail, the disciplinary conception of the educational process.

Locke had served as a tutor in an English nobleman's family, had worked out his educational theories in practice and thought them through as mind processes, and had become thoroughly convinced that it was the process of learning that was important, rather than the thing learned. Education to him was a process of disciplining the body, fixing good habits, training the youth in moral situations, and training the mind through work with stud-

[1] Locke was the first to lay the basis for modern scientific psychology to supersede the philosophic psychology of Plato and Aristotle. In his *Essay on the Conduct of the Human Understanding* (1690) upon which he spent many years of labor, he first applied the methods of scientific observation to the mind, analyzed experiences, and employed introspection and comparative mental study. He thus built up a psychology based on the analysis of experiences, and came to the conclusion that our knowledge is derived by reflection on experience coming through sensation. He is consequently called the founder of empirical psychology, and the forerunner of modern experimental psychology and child study. His philosophy, and his theory of education as well, thus came to be a philosophy of experience — a rejection of mere authority, *and a constant* appeal to reason as a guide.

ies selected because of their disciplinary value. This conception of education he sets forth well in the following paragraph, taken from his *Thoughts:*

> The great Work of the Governor is to fashion the Carriage and form the Mind; to settle in his Pupils good Habits and the Principles of Virtue and Wisdom; to give him by little and little a View of Mankind, and work him into a Love and Imitation of what is excellent and praiseworthy; and in the Prosecution of it, to give him Vigor, Activity, and Industry. The Studies which he sets him upon, are but as it were the Exercise of his Faculties, and Employment of his Time, to keep him from Sauntering and Idleness, to teach him Application, and accustom him to take Pains, and to give him some little Taste of what his own Industry must perfect (§ 94).

In his *Thoughts* Locke first sets forth at length the necessity for disciplining the body by means of diet, exercise, and the hardening process. "A sound mind in a sound body" he conceives to be "a short but full description of a happy state in this world," and a fundamental basis for morality and learning. The formation of good habits and manners through proper training, and the proper adjustment of punishments and rewards next occupies his attention, and he then explains his theory as to making all punishments the natural consequences of acts. Similarly the mind, as the body, must be disciplined to virtue by training the child to deny, subordinate desires, and apply reason to acts. The formation of good habits and the disciplining of the desires Locke regards as the foundations of virtue. On this point he says:

> As the Strength of the Body lies chiefly in being able to endure Hardship, so also does that of the Mind. And the great Principle and Foundation of all Virtue and Worth is plac'd in this: — That a Man is able to *deny himself* his own Desires, cross his own Inclinations, and purely follow what Reason directs as best, tho' the Appetite lean the other Way (§ 33).

Similarly, in intellectual education, good thinking and the employment of reason is the aim, and these, too, must be attained through the proper discipline of the mind. Good intellectual education does not consist merely in studying and learning, he contends, as was the common practice in the grammar schools of his time, but must be achieved by a proper drilling of the powers of the mind through the use of selected studies. . The purpose of education, he holds, is above all else to make man a reasoning creature. Nothing, in his judgment, trains to reason closely so well as the study of mathematics, though Locke would have his

boy "look into all sorts of knowledge," and train his understanding with a wide variety of exercises. In the education given in the grammar schools of his time he found much that seemed to him wasteful of time and thoroughly bad in principle, and he used much space to point out defects and describe better methods of teaching and management, giving in some detail reasons therefor. His ideas as to needed reforms in the teaching of Latin (**R. 227**) are illustrative.

Locke on elementary education. For the beginnings of education, and for elementary education in general, Locke sticks close to the prevailing religious conception of his time. As for the education of the common people, he writes:

> The knowledge of the Bible and the business of his own calling is enough for the ordinary man; a Gentleman ought to go further.

Continuing regarding the beginnings of education and the studies and textbooks of his day, he says:

> The Lord's Prayer, the Creeds, and the Ten Commandments, 't is necessary he should learn perfectly by heart. . . . What other Books there are in *English* of the Kind of those above-mentioned (besides the Primer) fit to engage the Liking of Children, and tempt them to *read*, I do not know; . . . and nothing that I know has been considered of this Kind out of the ordinary Road of the Horn Book, Primer, Psalter, Testament, and Bible (§ 157).

Locke does, however, give some very sensible suggestions as to the reading of the Bible (**R. 228**), the imparting of religious ideas to children, and the desirability of transforming instruction so as to make it pleasant and agreeable, with plenty of natural playful activity.[1] On this point he writes:

> He that has found a Way how to keep up a Child's Spirit easy, active, and free, and yet at the same time to restrain him from many Things he has a Mind to, and to draw him to Things that are uneasy to him; he, I say, that knows how to reconcile these seeming Contradictions, has, in my Opinion, got the true Secret of Education (§ 46).

Influence of Locke's *Thoughts*. The volume by Locke contains much that is sensible in the matter of educating a boy. The

[1] "Freedom and self-reliance, these are the watchwords of these two marvelously modern men (Montaigne and Locke). Expansion, real education, drawing out, widening out, that is the burden of their preaching; and voices in the wilderness theirs were! Narrowness, bigotry, flippancy, inertia, these were the rule until Rousseau's time, and even his voice was to fall upon deaf ears in England." (Monroe, *Jas. P., Evolution of the Educational Ideal*, p. 122.)

emphasis on habit formation, reasoning, physical activities and play, the individuality of children, and a reformed method in teaching are its strong points. The thoroughly modern character of the book, in most respects, is one of its marked characteristics. The volume seems to have been much read by middle and upper-class Englishmen, and copies of it have been found in so many old colonial collections that it was probably well known among early eighteenth-century American colonists. That the book had an important influence on the attitude of the higher social classes of England toward the education of their sons and, consciously or unconsciously, in time helped to redirect the teaching in that most characteristic of English educational institutions, the English Public (Latin Grammar) School, seems to be fairly clear. On elementary religious and charity-school education it had practically no influence.

Locke's great influence on educational thought did not come, though, for nearly three quarters of a century afterward, and it came then through the popularization of his best ideas by Rousseau. Karl Schmidt [1] well says of his work:

> Locke is a thorough Englishman, and the principle underlying his education is the principle according to which the English people have developed. Hence his theory of education has in the history of pedagogy the same value that the English nation has in the history of the world. He stood in strong opposition to the scholastic and formalized education current in his time, a living protest against the prevailing pedantry; in the universal development of pedagogy he gives impulse to the movement which grounds education upon sound psychological principles, and lays stress upon breeding and the formation of character.

Restating and expanding the leading ideas of Locke in his *Émile* (chapter XXI), and putting them into far more attractive literary form, Rousseau scattered Locke's ideas as to educational reform over Europe. In particular Rousseau popularized Locke's ideas as to the replacement of authority by reason and investigation, his emphasis on physical activity and health, his contention that the education of children should be along lines that were natural and normal for children, and above all Locke's plea for education through the senses rather than the memory. In so popularizing Locke's ideas, and at a time when all the political tendencies of the period were in the direction of the rejection of

[1] *Schmidt, Karl, Geschichte der Pädagogik*, translated in Barnard's *American Journal of Education*.

authority and the emphasis of the individual, those educational reformers who were inspired by the writings of Rousseau created and applied, largely on the foundations laid down by John Locke, a new theory as to educational aims and procedure which dominated all early nineteenth-century instruction. This we shall trace further in a subsequent chapter (chapter XXI).

It was at this point that the educational problem stood, in so far as a theory as to educational aims and the educational process was concerned, when Rousseau took it up (1762). Before passing to a consideration of his work, though, and the work of those inspired by him and by the French revolutionary writers and statesmen, let us close this third part of our history by a brief survey of the development so far attained, the purpose, character, aims, and nature of instruction in the schools, and their means of support and control at about the middle of the century in which Rousseau wrote, and before the philosophical and political revolutions of the latter half of the eighteenth century had begun to influence educational aims and procedure and control.

II. MID-EIGHTEENTH-CENTURY EDUCATIONAL CONDITIONS

The purpose. The purpose of maintaining the elementary vernacular school, in all European lands, remained at the middle of the eighteenth century much as it was a century before, though in the German States and in the American Colonies there was a noticeable shifting of emphasis from the older exclusively religious purpose toward a newer conception of education as preparation for life in the world here. Still, one learned to read chiefly "to learn some orthodox Catechism," "to read fluently in the New Testament," and to know the will of God, or, as stated in the law of the Connecticut Colony (**R. 193**), "in some competent measure to understand the main grounds and principles of Christian religion necessary to salvation." The teacher was still carefully looked after as to his "soundness in the faith" (**R. 238 a**); he was required "to catechise his scholars in the principles of the Christian religion," and "to commend his labors amongst them unto God by prayer morning and evening,[1] taking care that his scholars do reverently attend during the same." The minister in practically all lands examined the children as to their knowledge of the Catechism and the Bible, and on his visits quizzed them as to the Sunday sermon. In Boston (1710) the ministers were required,

[1] *Rules for* the schools of Dorchester, Massachusetts.

on their school visits, to pray with the pupils, and "to entertain them with some instructions of piety adapted to their age." In Church-of-England schools "the End and Chief Design" of the schools established continued to be instruction in "the Knowledge and Practice of the Christian Religion as Professed and Taught in the Church of England" (**R. 238 b**). In German lands the elementary vernacular school was still regarded as "the portico of the Temple," "Christianity its principal work," and not as "mere establishments preparatory to public life, but be pervaded by the religious spirit." [1] The uniform system of public schools ordered established for Prussia by Frederick the Great, in 1763, were after all little more than religious schools (**R. 274**), conducted for purposes of both Church and State. As Frederick expressed it, "we find it necessary and wholesome to have a good foundation laid in the schools by a rational and a Christian education of the young for the fear of God, and other useful ends." In the schools of La Salle's organization, which was most prominent in elementary vernacular education in Catholic France, the aim continued to be (**R. 182**) "to teach them to live honestly and uprightly, by instructing them in the principles of our holy religion and by teaching them Christian precepts."

Weakening of the old religious theory. By the middle of the eighteenth century, however, there is a noticeable weakening of the hold of the old religious theory on the schools in most Protestant lands. In England there was a marked relaxation of the old religious intolerance in educational matters as the century proceeded, and new textbooks, embodying but little of the old gloomy religious material, appeared and began to be used. By a series of decisions, between 1670 and 1701 (chapter XXIV), the English courts broke the hold of the bishops in the matter of the licensing of elementary schoolmasters, and by the Acts of 1713 and 1714 the Dissenters were once more allowed to conduct schools of their own. Coincident with this growth of religious tolerance among the English we find the Church of England redoubling its efforts to hold the children of its adherents, by the organization of parish schools and the creation of a vast system of charitable religious schools. In German lands, too, a marked shifting of emphasis away from solely religious ends and toward the needs of the government began, toward the end of the eight-

[1] *Duke Eberhard Louis's Renewed Organization of the German School, 1720; republished 1782.*

eenth century, to be evident. In Würtemberg, which was somewhat typical of late eighteenth-century action by other German States, a Circular of the General Synod, of November 1787, declares the German schools to be "those nurseries in which should be taught the true and genuine idea of the duties of men — created with a reasoning soul — toward God, government, their fellow-men, and themselves, and also at least the first rudiments of useful and indispensable knowledge."

It was in the American Colonies, though, that the waning of the old religious interest was most notable. Due to rude frontier conditions, the decline in force of the old religious-town governments, the diversity of sects, the rise of new trade and civil interests, and the breakdown of old-home connections, the hold on the people of the old religious doctrines was weakened there earlier than in the old world. By 1750 the change in religious thinking in America had become quite marked. As a consequence many of the earlier parochial schools had died out, while in the New England Colonies the colonial governments had been forced to exercise an increasing state oversight of the elementary school to keep it from dying out there as well.

Studies and textbooks. The studies of the elementary vernacular school remained, throughout the whole of the eighteenth century, much as before, namely, reading, a little writing and ciphering, some spelling, religion, and in Teutonic countries a little music. La Salle (**R. 182**) had prescribed, for the Catholic vernacular schools of France, instruction in French, some Latin, "orthography, arithmetic, the matins and vespers, le Pater, l'Ave Maria, le Credo et le Confiteor, the Commandments, responses, Catechism, duties of a Christian, and maxims and precepts drawn from the Testament." The Catechism was to be taught one half-hour daily. The schoolbooks in England in Locke's day, as he tells us (p. 435), were "the Horn Book, Primer, Psalter, Testament, and Bible." These indicate merely a religious vernacular school. The purpose stated for the English Church charity-schools (**R. 238 b**), schools that attained to large importance in England and the American Colonies during the eighteenth century, shows them to have been, similarly, religious vernacular schools. The *School Regulations* which Frederick the Great promulgated for Prussia (1763), fixed the textbooks to be used (**R. 274**, § 20), and indicate that the instruction in Prussia was still *restricted to reading*, writing, religion, singing, and a little

arithmetic. In colonial America, Noah Webster's description (R. 230) of the schools he attended in Connecticut, about 1764–70, shows that the studies and textbooks were "chiefly or wholly Dilworth's Spelling Books, the Psalter, Testament, and Bible," with a little writing and ciphering. A few words of description of these older books may prove useful here.

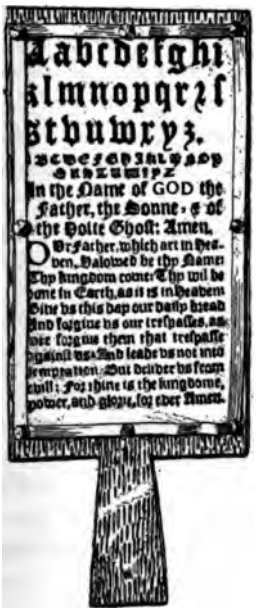


FIG. 130. A HORN BOOK

The Horn Book. The Horn Book goes back to the close of the fifteenth century,[1] and by the end of the sixteenth century was in common use throughout England. Somewhat similar alphabet boards, lacking the handle, were also used in Holland, France, and in German lands. This, a thin oak board on which was pasted a printed slip, covered by translucent horn, was the book from which children learned their letters and began to read, the mastery of which usually required some time. Cowper thus describes this little book:

> Neatly secured from being soiled or torn
> Beneath a pane of thin translucent horn,
> A book (to please us at a tender age
> 'T is called a book, though but a single page)
> Presents the prayer the Savior designed to teach,
> Which children use, and parsons — when they preach.

The Horn Book was much used well into the eighteenth century, but its reading matter was in time incorporated into the school Primer, now evolved out of an earlier elementary religious manual.

The Primer. Originally the child next passed to the Catechism and the Bible, but about the middle of the seventeenth century the Primer began to be used. The Primer in its original form was a simple manual of devotion for the laity, compiled

[1] One of the earliest horn books known appears in the illuminated manuscript shown in Figure 44, which dates from 1503. The first definitely known horn book in England dates from 1587, while most of the specimens found in museums date from about the middle of the eighteenth century. As improvements or variations *of the horn* book, cardboard sheets and wooden squares, known as battledores, appeared *after 1770. On these* the illustrated alphabet was printed. (See Tuer, A. W., *History of the Horn Book*, 2 vols., illustrated, London, 1886, for detailed descriptions.)

without any thought of its use in the schools. It contained the Creed, the Lord's Prayer, the Ten Commandments, and a few of the more commonly used prayers and psalms.[1] The Catechism soon was added, and with the prefixing of the alphabet and a few syllables and words it was transformed, as schools arose, into the first reading book for children. There was at first no attempt at grading, illustration, or the introduction of easy reading material. About the close of the seventeenth century the illustrated Primer, with some attempt at grading and some additional subject-matter, made its appearance, both in England and America, and at once leaped into great popularity.

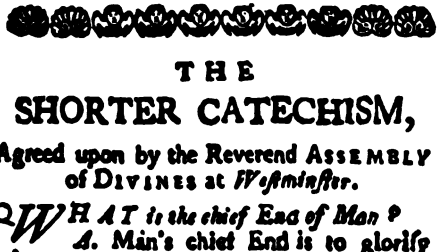
The idea possibly goes back to the *Orbis Pictus* (1654) of Comenius (p. 413: **R. 221**), the first illustrated schoolbook ever written. The first English Primer adapted to school use was *The Protestant Tutor*, a rather rabid anti-Catholic work which appeared in London, about 1685. A later edition of this contained the alphabet, some syllables and words, the figures and letters, the list of the books of the Bible, an alphabet of lessons, the Lord's Prayer, the Creed, the Ten Commandments, and a poem, long famous, on the death of the martyr, John Rogers.[2] It was an abridgement of this book which the same publisher brought out in Boston, about 1690, under the name of *The New England Primer* (**R. 202**). This at once leaped into great popularity, and became the accepted reading book in all the schools of the American Colonies except those under the Church of England. For the next century and a quarter it was the chief school and reading book in use among the Dissenters and Lutherans in America. Schoolmasters drilled the children on the reading matter and the Catechism it contained, and the people recited from it yearly in the churches. It was also used for such spelling as was given. It was the first great American textbook success, and was still in use in the Boston dame schools as late as 1806. It was reprinted in England, and enjoyed a great sale among Dissenters there. Its sales in America alone have been estimated at least three million copies. The sale in Europe was also large. It was followed in

[1] The diversity of religious primers which had grown up by 1565 led Henry VIII to cause to be issued a unified and official Primer, containing the Pater Noster, Ave Maria, Credo, and the Ten Commandments.

[2] The title-page of an edition of 1715 declares that edition to be: "*The Protestant Tutor*, instructing Youth and Others, in the compleat method of *Spelling*, *Reading*, and *Writing True English:* Also discovering to them the Notorious Errors, Damnable *Doctrines*, and cruel *Massacres* of the bloody Papists which England may *expect from a Popish* Successor."

England by other Primers and other introductory reading books, of which *The History of Genesis* (1708), a series of simple stories retold from the first book of the Bible, and *The Child's Weeks-Work* (1712), containing proverbs, fables, conundrums, lessons on behavior, and a short catechism, are types. Frederick the Great, in his list of required textbooks for Prussian schools (**R. 274, § 20**), does not mention a Primer.

The Catechism. In all Protestant German lands the Shorter Catechism prepared by Luther, or the later Heidelberg Catechism; in Calvinistic lands the Catechism of Calvin; and in England and the American Colonies the Westminster Catechism,[1] formed the backbone of the religious instruction. Teachers drilled their pupils in these as thoroughly as on any other subject, writing masters set as copies sentences from the book, children were required to memorize the answers, and the doctrines contained were emphasized by teacher and preacher so that the children were saturated with the religious ideas set forth. No book except the Bible did so much to form the character, and none so much to fix the religious bias of the children. Almost equal importance was given to the Catechism in Catholic lands (**R. 182, §§ 21–22**), though there supplemented by more religious influences derived from the ceremonial of the Church.



THE
SHORTER CATECHISM,
Agreed upon by the Reverend ASSEMBLY of DIVINES at *Weſtminſter*.

Q. *WHAT is the chief End of Man?*
A. Man's chief End is to glorify God and enjoy him forever.
Q. *What Rule hath God given to direct us how we may glorify and enjoy him?*
A. The Word of God which is contained in the Scriptures of the Old and New Teſtament, is the only rule to direct us how we may glorify and enjoy Him.
Q. *What do the Scriptures principally teach?*
A. The Scriptures principally teach what Man is to believe concerning God, and what Duty God requires of Man.
Q. *What is God?*
A. God is a Spirit, Infinite, Eternal and Unchangeable, in his Being, Wiſdom, Powr, Holineſs, Juſtice, Goodneſs and Truth.
Q. *Are there more Gods than One?*

FIG. 131. THE WESTMINSTER CATECHISM
(A page from *The New England Primer*, natural size)

[1] This was compiled by the Westminster Assembly of Divines, called together by Parliament, in 1643, composed of 121 clergymen, 30 of the laity, and 5 special commissioners from Scotland. It held 1163 sessions, extending over six years, and framed the series of 107 questions and answers which appeared in the Primer as "The Shorter Catechism."

Spellers. The next step forward, in the transition from the religious Primer to secular reading matter for school children, came in the use of the so-called Spellers. Probably the first of these was *The English School-Master* of Edmund Coote (**R. 229**), first issued in 1596. This gave thirty-two pages to the alphabet and spelling; eighteen to a shorter Catechism, prayers, and psalms; five to chronology; two to writing copies; two to arithmetic; and twenty to a list of hard words, alphabetically arranged and explained. As will be seen from this analysis of contents, this was a schoolmaster's general manual and guide. After about 1740 such books became very popular, due to the publication that year of Thomas Dilworth's *A New Guide to the English Tongue.* This book contained, as the title-page (**R. 229**) declared, selected lists of words with rules for their pronunciation, a short treatise on grammar, a collection of fables with illustrations for reading, some moral selections, and forms of prayer for children. It became very popular in New as well as in old England, and was followed by a long line of imitators, culminating in America in the publication of Noah Webster's famous blue-backed *American Spelling Book*, in 1783. This was after the plan of the English Dilworth, but was put in better teaching form. It contained numerous graded lists of words, some illustrations, a series of graded reading lessons, and was largely secular in character. It at once superseded the expiring *New England Primer* in most of the American cities, and continued popular in the United States for more than a hundred years.[1]



FIG. 132. THOMAS DILWORTH (?–1780)
The most celebrated English textbook writer of his day.
(From the Frontispiece of his *Schoolmaster's Assistant*, 1740)

[1] So great was the sale of this book that the author was able to support his family, during the twenty years (1807–27) he was at work on his *Dictionary of the English Language*, entirely from the royalties from the *Speller* though the copyright returns were less than one cent a copy. At the time of his death (1843), the sales *were still approximately* a million copies a year, and the book is still on sale.

It was the second great American textbook success, and was followed by a long list of popular Spellers and Readers, leading up to the excellent secular Readers of the present day.



FIG. 133. FRONTISPIECE TO NOAH WEBSTER'S "AMERICAN SPELLING BOOK"

This is from the 1827 edition, reduced one third in size.

Arithmetic and Writing. The first English Arithmetic, published about 1540 to 1542, has been entirely lost, and was probably read by few. The first to attain any popularity was *Cocker's Arithmetic* (1677), this "Being a Plain and Familiar Method suitable to the meanest Capacity, for the understanding of that incomparable Art." A still more popular book was *Arithmetick: or that Necessary Art Made Most Easie*, by J. Hodder, Writing Master, a reprint of which appeared in Boston, in 1719. The first book written by an American author was Isaac Greenwood's *Arithmetick, Vulgar and Decimal*, which appeared in Boston, in 1729. In 1743 appeared Dilworth's *The Schoolmaster's Assistant*, a book which retained its popularity in both England and America until after the beginning of the nineteenth century.

No text in Arithmetic is mentioned in the School Regulations of Frederick the Great (**R. 274, § 20**), or in scarcely any of the descriptions left us of eighteenth-century schools. The study itself was common, but not universal, and was one that many teachers were not competent to teach. To possess a reputation as an "arithmeticker" was an important recommendation for a teacher, while for a pupil to be able to do sums in arithmetic was unusual, and a matter of much pride to parents. The subject was frequently taught by the writing master, in a separate school,[1] while the reading teacher confined himself to reading, spelling, and religion. Thus, for example, following earlier English practice, the Town Meeting of Boston, in 1789, ordered "three reading schools

[1] In Nuremberg, as an example of German practice, the guild of writing and *arithmetic masters* continued, throughout all of the eighteenth century, and even *into the nineteenth*, as an organization separate from that of other types of *teachers*.

and three writing schools established in the town" for the instruction of children between the ages of seven and fourteen, the subjects to be taught in each being:

The writing schools	*The reading schools*
Writing	Spelling
Arithmetic	Accentuation
	Reading of prose and verse
	English grammar and composition

The teacher might or might not possess an arithmetic of his own, but the instruction to the pupil was practically always dictated and copied instruction. Each pupil made up his own book of rules and solved problems, and few pupils ever saw a printed arithmetic. Many of the early arithmetics were prepared after the catechism plan. There was almost no attempt to use the subject for drill in reasoning or to give a concrete type of instruction, before about the middle of the eighteenth century,[1] and but little along such reform lines was accomplished until after the beginning of the nineteenth century.

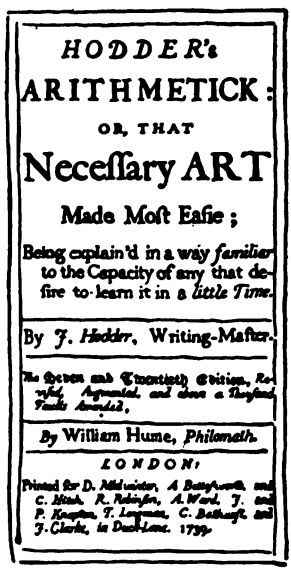

HODDER's
ARITHMETICK:
OR, THAT
Neceſſary ART
Made Moſt Eaſie;
Being explain'd in a way *familiar* to the Capacity of any that deſire to learn it in a *little Time*.
By *J. Hodder*, Writing-Maſter.
By William Hume, *Philomath.*
LONDON:

FIG. 134. TITLE-PAGE OF HODDER'S ARITHMETIC

An early reprint of this famous book appeared in Boston in 1719.

Writing, similarly, was taught by dictation and practice, and the art of the "scrivener," as the writing master was called, was one thought to be difficult to learn. The lack of practical value of the art, the high cost of paper, and the necessity usually for special lessons, all alike tended to make writing a much less commonly known art than reading. Fees also were frequently charged for instruction in writing and arithmetic; reading, spelling, and religion being the only free subjects. The scrivener and the arithmetic teacher also frequently moved about,

[1] Francke, in his Institutions at Halle (p. 418), had tried to develop a number-concept, and apply the teaching. In the Braunschweig-Lüneburg school decree of 1737 appeared directions for beginning number work by counting the fingers, apples, etc., and basing the multiplication table on addition. A few German writers during the eighteenth century suggested better instruction; Basedow (chapter XXII) tried to institute reform in the teaching of the subject, but it was left for Pestalozzi (*chapter XXI) to give the* first real impetus to the rational teaching of the subject.

as business warranted, and was not fixed as was the teacher of the reading school.

The teachers. The development of the vernacular school was retarded not only by the dominance of the religious purpose of the school, but by the poor quality of teachers found everywhere in the schools. The evolution of the elementary-school teacher of to-day out of the church sexton, bell-ringer, or grave-digger,[1] or out of the artisan, cripple, or old dame who added school teaching to other employment in order to live, forms one of the interesting as well as one of the yet-to-be-written chapters in the history of the evolution of the elementary school.

Teachers in elementary schools everywhere in the eighteenth century were few in number, poor in quality, and occupied but a lowly position in the social scale. School dames in England (**R. 235**) and later in the American Colonies, and on the continent of Europe teachers who were more sextons, choristers, beadles, bell-ringers, grave-diggers, shoemakers, tailors, barbers, pensioners, and invalids than teachers, too often formed the teaching body for the elementary vernacular school (**Rs. 231, 232, 233**). In Switzerland, the Netherlands, and some of the American Colonies, where schools had become or were becoming local semi-civic affairs, the standards which might be imposed for teaching also were low. The grant of the tailoring monopoly to the elementary teachers of Prussia,[2] in 1738, and Krüsi's recollections of how he became a schoolmaster in Switzerland, in 1793 (**R. 234**), were quite typical of the time. In Catholic France, and in some German Catholic lands as well, teaching congregations (p. 345), some of whose members had some rudimentary training for their work, were in charge of the existing parish schools. These provided a somewhat better type of teaching body than that frequently found in Protestant lands, though by the latter part of the eighteenth century the beginnings of teacher-training are to be seen in some of the German States. The Church of England, too, had by this

[1] Such offices were not considered in any sense as degrading, and the attaching of the new duty of instructing the young of the parish in reading and religion dignified still more the other church office. As schools grew in importance there was a gradual shifting of emphasis, and finally a dropping of the earlier duties. Many early school contracts in America (**Rs. 105; 236**) called for such church duties on the part of the parish teacher. See also footnote, p. 370.

[2] In 1722 country schoolmasters in Prussia were ordered selected from tailors, weavers, blacksmiths, wheelwrights, and carpenters, and in 1738 they were granted *the tailoring* monopoly in their villages, to help them to live. Later Frederick the *Great ordered that his* crippled and superannuated soldiers should be given teaching *positions in the elementary* vernacular schools of Prussia.

time organized strong Societies [1] for the preparation of teachers for Church-of-England schools, both at home and abroad. In Dutch, German, and Scandinavian lands, and in colonies founded by these people in America, the parish school, closely tied up with and dependent upon the parish church, was the prevailing type of vernacular school, and in this the teacher was regarded as essentially an assistant to the pastor (**R. 236**) and the school as a dependency of the Church.



FIG. 135. A "CHRISTIAN BROTHERS" SCHOOL

La Salle teaching at Grenoble. Note the adult type of dress of the boys.

In England, in addition to regular parish schools and endowed elementary schools, three peculiar institutions, known as the Dame School, the religious charity-school, and the private-adventure or "hedge school" had grown up, and the first two of these had reached a marked development by the middle of the eighteenth century. Because these were so characteristic of early English educational effort, and also played such an important part in the American Colonies as well, they merit a few words of description at this point.

The Dame School. The Dame School arose in England after the Reformation. By means of it the increasing desire for a rudimentary knowledge of the art of reading could be satisfied, and at the same time certain women could earn a pittance. This type of school was carried early to the American Colonies, and out of it was in time evolved, in New England, the American elementary school. The Dame School was a very elementary school, kept in a kitchen or living-room by some woman who, in her youth, had obtained the rudiments of an education, and who now desired to earn a small stipend for herself by imparting to the children of her neighborhood her small store of learning. For a few pennies a week the dame took the children into her home and explained to them the mysteries connected with learning the beginnings of reading and spelling. Occasionally a little writing and counting

[1] The "Society for the Promotion of Christian Knowledge," organized in 1699 to aid the Church and provide schools at home, and the "Society for the Propagation of the Gospel in Foreign Parts," organized in 1702 to supply ministers and teachers *for churches and schools* in the English colonies.

Methods of instruction. Throughout the eighteenth century the method of instruction commonly employed in the vernacular schools was what was known as the individual method. This was wasteful of both time and effort, and unpedagogical to a high degree. R. 244. Everywhere the teacher was engaged chiefly in hearing recitations, testing memory, and keeping order. The pupils came to the master's desk, one by one (see Figures 98, 99), and recited what they had memorized. Aside from imposing discipline, teaching was an easy task. The pupils learned the assigned lessons and recited what they had learned. Such a thing as methodology — technique of instruction — was unknown. The dominance of the religious motive, too, precluded any liberal element in school instruction. the individual method was time-consuming. School buildings often were lacking, and in general there was an almost complete lack of any teaching equipment, books or supplies. Viewed from any modern standpoint the schools of the eighteenth century attained to but a low degree of efficiency. R. 244. The school hours were long, the schoolmaster's residence or place of work or business was commonly used as a schoolroom, and such regular schoolrooms as did exist were dingy and poorly suited to school purposes. Schools everywhere then were ungraded, the school of one teacher being like that of any other teacher of that class.

The waste of time and effort was the individual method of instruction was that children might attend school for years and get only a superficial training in reading and writing. Paulsen,[1] writing of schools of somewhat higher grade at an even later date, says that even in the better class of elementary schools

> many pupils never achieved anything beyond a little reading and knowing a few things by heart. . . . The instruction in reading was nothing else but a torture, protracted through years, from spelling out the alphabet and formation of syllables to the deciphering of complete words, without any real success in the end, while writing was nothing but a wearisome tracing of the letters, the net result of all the lessons being the gabbling of the Catechism and a few Bible texts and hymns learned over and over again.

The communication of information by the teacher to a class, or a class discussion of a topic were almost unknown. Hearing lessons, assigning new tasks, setting copies, making quill pens, dictating sums, and imposing order completely absorbed the time and the attention of the teacher.

[1] Paulsen, Friedrich, German Education, p. 141.

Year	*Schools*	*Boys*	*Girls*	*Total*
1699	0	0	0	0
1704	54	1386	745	2131
1709	88	2181	1221	3402
1714	117	3077	1741	4818

In England and Ireland combined the Society had, by 1714, a total of 1073 schools, with 19,453 pupils enrolled, and by 1729 the number had increased to 1658, with approximately 34,000 pupils. From England the charity-school idea was early carried to the Anglican Colonies in America and became a fixed institution in New Jersey, Pennsylvania, Delaware, Maryland, and somewhat in the Colonies farther south. In the Pennsylvania constitution of 1790 we find the following directions for the establishment of a state charity-school system to supplement the parish schools of the churches:



FIG. 139. A CHARITY-SCHOOL BOY IN UNIFORM
Saint Anne's, Soho, England

Sec. 1. The legislature shall, as soon as conveniently may be, provide, by law, for the establishment of schools throughout the State, in such manner that the poor may be taught *gratis*.

The first Pennsylvania school law of 1802 carried this direction into effect by providing for pauper schools in the counties, a condition that was not done away with until 1834. In New Jersey the system lasted until 1838.

The private-adventure, or "hedge," school. This was a school analogous to the Dame School, but was kept by a man instead of a woman, and usually at his home or shop. Plate 15, showing a shoe cobbler teaching, represents one type of such schools. The term "hedge schools" arose in Ireland, where teaching was forbidden the Catholics, and secret schools arose in which priests and others taught what was possible. Of these McCarthy writes:[1]

On the highways and on the hillsides, in ditches and behind hedges, in the precarious shelter of the ruined walls of some ancient abbey, or under the roof of a peasant's cabin, the priests set up schools and taught the children of their race.

The term soon came to be applied to any kind of a poor school, taught in an irregular manner or place. Similar irregular schools

[1] *McCarthy*, Justin H., *Ireland since the Union*, p. 13.

Methods of instruction. Throughout the eighteenth century the method of instruction commonly employed in the vernacular schools was what was known as the individual method. This was wasteful of both time and effort, and unpedagogical to a high degree (**R. 244**). Everywhere the teacher was engaged chiefly in hearing recitations, testing memory, and keeping order. The pupils came to the master's desk, one by one (see Figures 98, 99), and recited what they had memorized. Aside from imposing discipline, teaching was an easy task. The pupils learned the assigned lessons and recited what they had learned. Such a thing as methodology — technique of instruction — was unknown. The dominance of the religious motive, too, precluded any liberal attitude in school instruction, the individual method was time-consuming, school buildings often were lacking, and in general there was an almost complete lack of any teaching equipment, books, or supplies. Viewed from any modern standpoint the schools of the eighteenth century attained to but a low degree of efficiency (**R. 244**). The school hours were long, the schoolmaster's residence or place of work or business was commonly used as a schoolroom, and such regular schoolrooms as did exist were dirty and noisy and but poorly suited to school purposes. Schools everywhere, too, were ungraded, the school of one teacher being like that of any other teacher of that class.

So wasteful of time and effort was the individual method of instruction that children might attend school for years and get only a mere start in reading and writing. Paulsen,[1] writing of schools in German lands at an even later date, says that even in the better type of vernacular schools

> many children never achieved anything beyond a little reading and knowing a few things by heart. . . . The instruction in reading was never anything else but a torture, protracted through years, from saying the alphabet and formation of syllables to the deciphering of complete words, without any real success in the end, while writing was nothing but a wearisome tracing of the letters, the net result of all the toil being the gabbling of the Catechism and a few Bible texts and hymns, learned over and over again.

The imparting of information by the teacher to a class, or a class discussion of a topic, were almost unknown. Hearing lessons, assigning new tasks, setting copies, making quill pens, dictating sums, and imposing order completely absorbed the time and the attention of the teacher.

[1] Paulsen, Friedrich, *German Education*, p. 141.

School discipline. The discipline everywhere was severe. "A boy has a back; when you hit it he understands," was a favorite pedagogical maxim of the time. Whipping-posts were sometimes set up in the schoolroom, and practically all pictures of the schoolmasters of the time show a bundle of switches near at hand. Boys in the Latin grammar schools were flogged for petty offenses (**R. 245**). The ability to impose order on a poorly taught and, in consequence, an unruly school was always an important requisite of the schoolmaster. A Swabian schoolmaster, Häuberle by name, with characteristic Teutonic attention to details, has left on record [1] that, in the course of his fifty-one years and seven months as a teacher he had, by a moderate computation, given 911,527 blows with a cane, 124,010 blows with a rod, 20,989 blows and raps with a ruler,

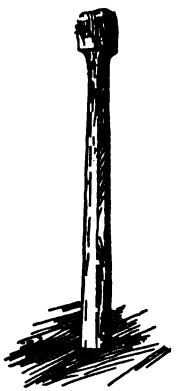


FIG. 141. A SCHOOL WHIPPING-POST

Drawn from a picture of a five-foot whipping-post which once stood in the floor of a schoolhouse at Sunderland, Massachusetts. Now in the Deerfield Museum.



FIG. 142. AN EIGHTEENTH-CENTURY GERMAN SCHOOL

Reproduction of an engraving by J. Mettenleiter, now in the Kupferstichkabinet, Munich, and printed in Joh. Ferd. Schlez's Dorfschulen zu Langenhausen. Nuremberg, 1795.

[1] Barnard, Henry. Translated from Karl von Raumer; in his *American Journal of Education, vol. v, p. 509.*

136,715 blows with the hand, 10,235 blows over the mouth, 7,905 boxes on the ear, 1,115,800 raps on the head, and 22,763 *notabenes* with the Bible, Catechism, singing book, and grammar. He had 777 times made boys kneel on peas, 613 times on a triangular piece of wood, had made 3001 wear the jackass, and 1707 hold the rod up, not to mention various more unusual punishments he had contrived on the spur of the occasion. Of the blows with the cane, 800,000 were for Latin words; of the rod 76,000 were for texts from the Bible or verses from the singing book. He also had about 3000 expressions to scold with, two thirds of which were native to the German tongue and the remainder his invention.

Another illustration of German school discipline, of many that might be cited, was the reform work of Johann Ernest Christian Haun, who was appointed, in 1783, as inspector of schools in the once famous Gotha (p. 317). Due to warfare and neglect the schools there had fallen into disrepute. Haun drove the incapable teachers from the work, and for a time restored the schools to something of their earlier importance. Among other reforms it is recorded that he forbade teachers to put irons around the boys' necks, to cover them with mud, to make them kneel on peas, or to brutally beat them. Diesterweg (**R. 244**) describes similar punishments as characteristic of eighteenth-century German schools. The eighteenth-century German schoolmaster shown in Fig. 142 was probably a good sample of his class.

Pedagogical writers of the time uniformly complain of the severe discipline of the schools, and the literature of the period abounds in allusions to the prevailing harshness of the school discipline. A few writers condemn, but most approve heartily of the use of the rod. "Spare the rod and spoil the child" had for long been a well-grounded pedagogical doctrine. Among many literary extracts that might be cited illustrating this belief, the following poem by the English poet Crabbe (1754–1832) is interesting. He puts the following words into the mouth of his early schoolmaster:

> Students like horses on the road,
> Must be well lashed before they take the load;
> They may be willing for a time to run,
> But you must whip them ere the work be done;
> To tell a boy, that if he will improve,
> His friends will praise him, and his parents love,
> Is doing nothing — he has not a doubt
> But they will love him, nay, applaud without;
> *Let no* fond sire a boy's ambition trust,
> *To make* him study, let him learn he must.

Conditions surrounding childhood. It is difficult for us of to-day to re-create in imagination the pitiful life-conditions which surrounded children a century and a half ago. Often the lot of the children of the poor, who then constituted the great bulk of all children, was little less than slavery. Wretchedly poor, dirty, unkempt, hard-worked, beaten about, knowing strong drink early, illiterate, often vicious — their lot was a sad one. For the children of the poor there were few, if any, educational opportunities. Writing on the subject David Salmon says:[1]

> The imagination of the twentieth century cannot fathom the poverty of the eighteenth. The great development of mines and manufactures, which has brought ease and independence within the reach of industrious labour everywhere, had hardly begun; employment was so scarce and intermittent, and wages were so low, that the working classes lived in hovels, dressed in rags, and were familiar with the pangs of hunger; while those who were forced to look to the rates for hovels, rags, and food sufficient to maintain a miserable life numbered a sixth of the whole population.

In the towns children were apprenticed out early in life, and for long hours of daily labor. Child welfare was almost entirely neglected, children were cuffed about and beaten at their work, juvenile delinquency was a common condition, child mortality was heavy, and ignorance was the rule. Schools generally were pay institutions or a charity, and not a birthright, and usually existed only for the middle and lower-middle classes in the population who were attendants at the churches and could afford to pay a little for the schooling given. Reading and religion were usually the only free subjects. Only in the New England Colonies, where the beginnings of town and colony school systems were evident, and in a few of the German States where state control was beginning to be exercised, was a better condition to be found.

Among the middle and upper social classes, particularly on the continent of Europe, a stiff artificiality everywhere prevailed. Children were dressed and treated as miniature adults, the normal activities of childhood were suppressed, and the natural interests and emotions of children found little opportunity for expression. Wearing powdered and braided hair, long gold-braided coats, embroidered waistcoats, cockaded hats, and swords, boys were treated more as adults than as children. Girls, too, with their long dresses, hoops, powdered hair, rouged faces, and demure

[1] Salmon, David, "The Education of the Poor in the Eighteenth Century", in *Educational Record*, London, 1908.



FIG. 143. CHILDREN AS MINIATURE ADULTS
Children leaving school, from an eighteenth-century drawing by Saint Aubin.

manner, were trained in a, for children, most unnatural manner.[1] The dancing master for their manners and graces, and the religious instructor to develop in them the ability to read and to go through a largely meaningless ceremonial, were the chief guides for the period of their childhood.

[1] "If you would comprehend the success of Rousseau's *Émile*, call to mind the children we have described, the embroidered, gilded, dressed-up, powdered little gentlemen, decked with sword and sash, . . . alongside of these, little ladies of six years, still more artificial, — so many veritable dolls to which rouge is applied, and with which a mother amuses herself for an hour and then consigns them to her maids for the rest of the day. This mother reads *Émile*. It is not surprising that she *immediately* strips the poor little thing (of its social harness of whalebone, iron, and hair) and determines to nurse her next child herself." (Taine, H. A., *The Ancient Régime, vol. II, p. 273.)*

School support. No uniform plan, in any country, had as yet been evolved for even the meager support which the schools of the time received. The Latin grammar schools were in nearly all cases supported by the income from old "foundations" and from students' fees, with here and there some state aid. The new elementary vernacular schools, though, had had assigned to them few old foundations upon which to draw for maintenance, and in consequence support for elementary schools had to be built up from new sources, and this required time.

In England the Act of Conformity of 1662 (**R. 166**), it will be remembered (p. 324), had laid a heavy hand on the schools by driving all Dissenters from positions in them, and the Five-Mile Act of 1665 had borne even more severely on the teachers in the schools of the Dissenters. Fortunately for elementary education in England, however, the English courts, in 1670, had decided in a test case that the teacher in an elementary school could not be deprived of his position by failure of the bishop to license him, if he were a nominee of the founder or the lay patron of the school. The result of this decision was that, between 1660 and 1730, 905 endowed elementary schools were founded in England, and 72 others previously founded had their endowments increased. The number continued to increase throughout the eighteenth century, and by 1842 had reached a total of 2194. These new foundations probably gave the best schooling of the time, and tended to stir the Established Church to action. Accordingly we find that during the eighteenth century the vestries of the different church parishes began the creation of parish elementary schools for the children of the poor of the parish, supporting a teacher for them out of the parish rates, and without specific legal authorization to do so. These new parish schools also contributed somewhat to the provision of elementary education, and mark the beginning of the church "voluntary schools" which were such a characteristic feature of nineteenth-century English education. We thus have, in England, endowed elementary schools, parish schools, dame schools, private-adventure schools of many types, and charity-schools, all existing side by side, and drawing such support as they could from endowment funds, parish rates, church tithes, subscriptions, and tuition fees. The support of schools by subscription lists (**R. 240**) was a very common proceeding. Education in England, more than in any other Protestant land, early came to be regarded as a benevolence which the State was under

no obligation to support. Only workhouse schools were provided for by the general taxation of all property.

In the Netherlands and in German lands church funds, town funds, and tuition fees were the chief means of support, though here and there some prince had provided for something approaching state support for the schools of his little principality. Frederick the Great had ordered schools established generally (1763) and had decreed the compulsory attendance of children (**R. 274**), but he had depended largely on church funds and tuition fees (§7) for maintenance, with a proviso that the tuition of poor and orphaned children should be paid from "any funds of the church or town, that the schoolmaster may get his income" (§8). In Scotland the church parish school was the prevailing type. In France the religious societies (p. 345) provided nearly all the elementary vernacular religious education that was obtainable.

In the Dutch Provinces, in the New England Colonies, and in some of the minor German States, we find the clearest examples of the beginnings of state control and maintenance of elementary schools — something destined to grow rapidly and in the nineteenth century take over the school from the Church and maintain it as a function of the State. The Prussian kings early made grants of land and money for endowment funds and support, and state aid was ordered granted by Maria Theresa for Austria (**R. 274 a**), in 1774. In the New England Colonies the separation of the school from the Church, and the beginnings of state support and control of education, found perhaps their earliest and clearest exemplification. In the other Colonies the lottery was much used (**R. 246**) to raise funds for schools, while church tithes, subscription lists, and school societies after the English pattern also helped in many places to start and support a school or schools.

Only by some such means was it possible in the eighteenth century that the children of the poor could ever enjoy any opportunities for education. The parents of the poor children, themselves uneducated, could hardly be expected to provide what they had never come to appreciate themselves. On the other hand, few of the well-to-do classes felt under any obligation to provide education for children not their own. There was as yet no realization that the diffusion of education contributed to the welfare of the State, or that the ignorance of the masses might be in any way a *public peril.* This attitude is well shown for England by the fact *that not a single law* relating to the education of the people, aside

from workhouse schools, was enacted by Parliament during the whole of the eighteenth century. The same was true of France until the coming of the Revolution. It is to a few of the German States and to the American Colonies that we must turn for the beginnings of legislation directing school support. This we shall describe more in detail in later chapters.

The Latin Secondary School. The great progress made in education during the eighteenth century, nevertheless, was in elementary education. Concerning the secondary schools and the universities there is little to add to what has previously been said. During this century the secondary school, outside of German lands, remained largely stationary. Having become formal and lifeless in its teaching (p. 283), and in England and France crushed by religious-uniformity legislation, the Latin grammar school of England and the surviving colleges in France practically ceased to exert any influence on the national life. The Jesuit schools, which once had afforded the best secondary education in Europe, had so declined in usefulness everywhere that they were about to be driven from all lands. The Act of Conformity of 1662 (**R. 166**) had dealt the grammar schools of England a heavy blow, and the eighteenth century found them in a most wretched condition, with few scholars, and their endowments shamefully abused. The Law of 1662, says Montmorency, "involved such a peering into the lives of schoolmasters, such a course of inquisitorial folly, that the position became intolerable. Men would not become schoolmasters. . . . Education had no meaning when none but political and religious hypocrites were allowed to teach. . . . National education was destroyed," and the grammar schools of England were "practically withdrawn during more than two centuries (1662–1870) from the national life." [1]

In German lands the old Latin schools continued largely unchanged until near the middle of the eighteenth century, with Latin, taught as it had been for a century or more, as the chief subject of study. Shortly after the coming of Frederick the Great to the throne (1740) the Latin schools of Prussia, and after them the Latin schools in other German States, were reorganized and given a new life. The influence of Francke's school at Halle (p. 418), and the new types of teaching developed there and by his followers elsewhere, began to be felt. German, French, and mathematics were given recognition, and some science work was

[1] *Montmorency, J. E. G. de., The Progress of Education in England*, pp. 45, 52.

here and there introduced. Above all, though, Greek now attained to the place of first importance in the reorganized Latin schools.

It was not until after 1740 that the German people awakened to the possibility of an independent national life. Then, under the new impulse toward nationality, French influence and manners were thrown off, German literature attained its Golden Age, the *Ritterakademieen* (p. 405) were discarded, and a number of the German Principalities and States revised their school regulations and erected, out of the old Latin schools, a series of humanistic *gymnasia* in which the study of Greek life and culture occupied the foremost place. New methods in classical study were thought out and applied, and a new pedagogical purpose — culture and discipline — was given to the regenerated Latin schools. A new Renaissance, in a way, took place in German lands,[1] and a knowledge of Greek was proclaimed by German university and gymnasial teachers as indispensable to a liberal education with an earnestness of conviction not exceeded by Battista Guarino (p. 268) four centuries before. To know Greek and to have some familiarity with Greek literature and history now came to be regarded as necessary to the highest culture,[2] and a pedagogical theory for such study was erected, based on the discipline of the mind,[3] which dominated the German classical school throughout the entire nineteenth century. It was in the eighteenth century

[1] A change now took place in the intellectual life of Germany: "The nation began to make itself independent of French influence. In literature Klopstock and Lessing broke the fetters of French classicism. An ardent desire for a deeper culture peculiar to the German people asserted itself. But the soil of the national life was too poor in genus for a purely German culture, hence scholars looked for new models and found them in classical antiquity. The ancient authors became again the masters of culture and taste; with this difference, though, that it was not desired to learn how to express their thoughts as well as the learner's thoughts in Latin, but to become familiar with their manner of thinking and feeling, for the purpose of enlarging and ennobling German thought and speech. From this standpoint Greek, on account of its more valuable literature, assumed a higher importance, and, by degrees, a superiority over Latin." (Nohle, E., *History of the German School System*, pp. 48–49.)

[2] "If any one be destined for a studious career, let him not shirk his Greek lessons, inasmuch as he would thereby suffer irretrievable loss. . . . He who reads the classic writers, studying mathematical reasoning at the same time, trains his mind to distinguish what is true or false, beautiful or unsightly, fills his memory with manifold fine thoughts, attains skill in grasping the ideas of others as well as in fluently expressing his own, acquires a number of excellent maxims for the improvement of the understanding and the will, and thus learns by practice nearly all that a good compendium of philosophy could teach him in systematic order and dogmatic form." (School Regulations for Braunschweig-Lüneburg, of 1737.)

[3] "*Be assured that if* you forget your Greek, yes, even your Latin too, you still *have the advantage of having* given your mind a training and discipline that will go *with you into your future* occupation." (Friedrich Gedike, 1755–1803.)

also that the German States began the development of the scientific secondary school (*Realschule*), see p. 420, as described in a preceding chapter.

Rise of the Academy in America. As we have seen (p. 361), the English Latin grammar school was early (1635) carried to New England, and set up there and elsewhere in the Colonies, but after the close of the seventeenth century its continued maintenance was something of a struggle. Particularly in the central and southern colonies, where commercial demands early made themselves felt, the tendency was to teach more practical subjects. This tendency led to the evolution, about the middle of the eighteenth century, of the distinctively American Academy, with a more practical curriculum, and by the close of the century it was rapidly superseding the older Latin grammar school. Franklin's Academy at Philadelphia, which began instruction in 1751, and which later evolved into the University of Pennsylvania, was probably the first American Academy. The first in Massachusetts was founded in 1761, and by 1800 there were seventeen in Massachusetts alone. The great period of academy development was the first half of the nineteenth century. The Phillips Academy, at Andover, Massachusetts, founded in 1788, reveals clearly the newer purpose of these American secondary schools. The foundation grant of this school gives the purpose to be:

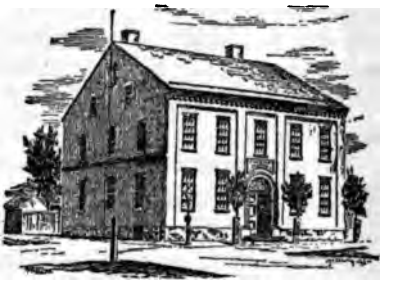


FIG. 144. A PENNSYLVANIA ACADEMY
York Academy, York, Pennsylvania, founded by the Protestant Episcopal Church, in 1787.

to lay the foundation of a public free school or ACADEMY for the purposes of instructing Youth, not only in English and Latin Grammar, Writing, Arithmetic, and those Sciences wherein they are commonly taught; but more especially to learn them the GREAT END AND REAL BUSINESS OF LIVING . . . it is again declared that the *first* and *principle* object of this Institution is the promotion of TRUE PIETY and VIRTUE; the *second*, instruction in the English, Latin, and Greek Languages, together with Writing, Arithmetic, Music, and the Art of Speaking; the *third*, practical Geometry, Logic, and Geography; and the *fourth*, such other liberal Arts and Sciences or Languages, as opportunity and ability may hereafter admit, and as the *TRUSTEES shall* direct.

Though still deeply religious, these new schools usually were free from denominationalism. Though retaining the study of Latin, they made most of new subjects of more practical value. A study of real things rather than words about things, and a new emphasis on the native English and on science were prominent features of their work. They were also usually open to girls, as well as boys, — an innovation in secondary education before almost wholly unknown. Many were organized later for girls only. These institutions were the precursors of the American public high school, itself a type of the most democratic institution for secondary education the world has ever known.

The universities. The condition of the universities by the middle of the eighteenth century we traced in the preceding chapter. They had lost their earlier importance as institutions of learning, but in a few places the sciences were slowly gaining a foothold, and in German lands we noted the appearance of the first two modern universities — institutions destined deeply to influence subsequent university development, as we shall point out in a later chapter.

End of the transition period. We have now reached, in our study of the history of educational progress, the end of the transition period which marked the change in thinking from mediæval to modern attitudes. The period was ushered in with the beginnings of the Revival of Learning in Italy in the fourteenth century, and it may fittingly close about the middle of the eighteenth.

We now stand on the threshold of a new era in world history. The same questioning spirit that animated the scholars of the Revival of Learning, now full-grown and become bold and self-confident, is about to be applied to affairs of politics and government, and we are soon to see absolutism and mediæval attitudes in both Church and State questioned and overthrown. New political theories are to be advanced, and the divine right of the people is to be asserted and established in England, the American Colonies, and in France, and ultimately, early in the twentieth century, we are to witness the final overthrow of the divine-right-of-kings idea and a world-wide sweep of the democratic spirit. A new human and political theory as to education is to be evolved; the school is to be taken over from the Church, vastly expanded *in scope,* and made a constructive instrument of the State; and *the wonderful nine*teenth century is to witness a degree of human,

scientific, political, and educational progress not seen before in all the days from the time of the Crusades to the opening of the nineteenth century. It is to this wonderful new era in world history that we now turn.

QUESTIONS FOR DISCUSSION

1. Contrast a religious elementary school, with the Catechism as its chief textbook, with a modern public elementary school.
2. Contrast the elementary schools of Mulcaster and Comenius.
3. To what extent did the religious teachings of the time support Locke's ideas as to the disciplinary conception of education?
4. Do we to-day place as much emphasis on habit formation as did Locke? On character? On good breeding?
5. State some of the reasons for the noticeable weakening of the hold of the old religious theory as to education, in Protestant lands, by the middle of the eighteenth century.
6. How do you explain the slow evolution of the elementary teacher into a position of some importance? Is the evolution still in process? Illustrate.
7. What were the motives behind the organization of the religious charity-schools?
8. Show how tax-supported workhouse schools represented, for England, the first step in public-school maintenance.
9. Show that teaching under the individual method of instruction was school keeping, rather than school teaching.
10. How do you explain the general prevalence of harsh discipline well into the nineteenth century?
11. Did any other country have, in the eighteenth century, so mixed a type of elementary education as did England? Why was it so badly mixed there?
12. Show how the English Act of Conformity, of 1662, stifled the English Latin grammar schools.
13. What reasons were there for the development of the more practical Academy in America, rather than in England?
14. Compare the American Academy with the German *Realschule.*

SELECTED READINGS

In the accompanying *Book of Readings* the following selections, illustrative of the contents of this chapter, are reproduced:

226. Mulcaster: Table of Contents of his *Positions.*
227. Locke: On the Teaching of Latin.
228. Locke: On the Bible as a Reading Book.
229. Coote-Dilworth: Two early "Spelling Books."
230. Webster: Description of Pre-Revolutionary Schools.
231. Raumer: Teachers in Gotha in 1741.
232. Raumer: An 18th Century Swedish People's School.
233. Raumer: Schools of Frankfurt-am-Main during the Eighteenth Century.
234. Krüsi: A Swiss Teacher's Examination in 1793.
235. Crabbe; White; Shenstone: The English Dame School described.
236. *Newburgh:* A Parochial-School Teacher's Agreement.

237. Saint Anne: Beginnings of an English Charity School.
238. Regulations: Charity-School Organization and Instruction.
(*a*) Qualifications for the Master.
(*b*) Purpose and Instruction.
239. Allen and McClure: Textbooks used in English Charity-Schools.
240. England: A Charity-School Subscription Form.
241. Southwark: The Charity-School of Saint John's Parish.
242. Gorsham: An Eighteenth-Century Indenture of Apprenticeship.
243. Indenture: Learning the Trade of a Schoolmaster.
244. Diesterweg: The Schools of Germany before Pestalozzi.
245. England: Free School Rules, 1734.
246. Murray: A New Jersey School Lottery.

QUESTIONS ON THE READINGS

1. State the main points in Mulcaster's scheme (**226**) for education.
2. Characterize Locke's criticism (**227**) on the teaching of Latin.
3. State Locke's ideas as to the use of the Bible (**228**).
4. Characterize the nature and contents of the so-called "Spellers" by Coote and Dilworth (**229**).
5. Compare the Connecticut common school, as described by Webster (**230**), with an English charity-school (**238 b**), or a Swedish popular school (**232**) of the time.
6. Just what state of vernacular education in Teutonic lands is indicated by the three selections (**231, 232, 233**)?
7. Compare the proprietary right of the teachers at Frankfort (**233**) with the right of control claimed over song schools by the Precentor of a mediæval cathedral (**83**).
8. Do such conditions as Krüsi describes (**234**) exist anywhere to-day?
9. Characterize the Dame School of England, as to instruction and control, from the descriptions given in the selections (**235**) reproduced.
10. State the relationship of teacher and minister at Newburgh (**236**), and indicate the nature and probable extent of his income.
11. State the purpose of the founders of Saint Anne of Soho (**237**), and characterize the type of school they created.
12. What does the qualification for a charity-school teacher (**238 a**) indicate as to the nature of the teacher's calling in such schools? Outline the instruction (**238 b**) in such a school.
13. What instruction did the textbooks as printed (**239**) provide for?
14. Show the voluntary and benevolent character of the charity-school by comparing the subscription form (**240**) with some voluntary subscription form used to-day.
15. How did the school in Saint John's parish (**241**) differ from apprenticeship training?
16. What changes do you note between the mediæval Indenture of Apprenticeship (**99**) and the eighteenth-century English form (**242**)?
17. Compare Readings **201** and **242** on apprenticeship.
18. Compare conditions described in **244** with **231–233.**
19. What do the Free School Rules of 1734 (**245**) indicate as to duties and discipline?
20. What does the use of the lottery for school support (**246**) indicate as to the conception and scope of education at the time?

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PART IV

MODERN TIMES

THE ABOLITION OF PRIVILEGE

THE RISE OF DEMOCRACY

A NEW THEORY FOR EDUCATION EVOLVED

THE STATE TAKES OVER THE SCHOOL

CHAPTER XIX

THE EIGHTEENTH A TRANSITION CENTURY

The eighteenth century a turning-point. The eighteenth century, in human thinking and progress, marks for most western nations the end of mediævalism and the ushering-in of modern forms of intellectual liberty. The indifference to the old religious problems, which was clearly manifest in all countries at the beginning of the century, steadily grew and culminated in a revolt against ecclesiastical control over human affairs. This change in attitude toward the old problems permitted the rise of new types of intellectual inquiry, a rapid development of scientific thinking and discovery, the growth of a consciousness of national problems and national welfare, and the bringing to the front of secular interests to a degree practically unknown since the days of ancient Rome. In a sense the general rise of these new interests in the eighteenth century was but a culmination of a long series of movements looking toward greater intellectual freedom and needed human progress which had been under way since the days when *studia generalia* and guilds first arose in western Europe. The rise of the universities in the thirteenth and fourteenth centuries, the Revival of Learning in the fourteenth and fifteenth centuries, the Protestant Revolts in the sixteenth, the rise of modern scientific inquiry in the sixteenth and seventeenth, and Puritanism in England and Pietism in Germany in the seventeenth, had all been in the nature of protests against the mediæval tendency to confine and limit and enslave the intellect. In the eighteenth century the culmination of this rising tide of protest came in a general and determined revolt against despotism in either Church or State, which, at the close of the century, swept away ancient privileges, abuses, and barriers, and prepared the way for the marked intellectual and human and political progress which characterized the nineteenth century.

Significance of the change in attitude. The new spirit and interests and attitudes which came to characterize the eighteenth century in the more progressive western nations meant the ultimate overthrow of the tyranny of mediæval supernatural theology, *the evolution* of a new theory as to moral action which

should be independent of theology, the freeing of the new scientific spirit from the fetters of church control, the substituting of new philosophical and scientific and economic interests for the old theological problems which had for so long dominated human thinking, the substitution of natural political organization for the older ecclesiastical foundations of the State, the destruction of what remained of the old feudal political system, the freeing of the serf and the evolution of the citizen, and the rise of a modern society interested in problems of national welfare — government in the interest of the governed, commerce, industry, science, economics, education, and social welfare. The evolution of such modern-type governments inevitably meant the creation of entirely new demands for the education of the people and for far-reaching political and social reforms.

This new eighteenth-century spirit, which so characterized the mid-eighteenth century that it is often spoken of as the "Period of the Enlightenment," [1] expressed itself in many new directions, a few of the more important of which will be considered here as of fundamental concern for the student of the history of educational progress. In a very real sense the development of state educational systems, in both European and American States, has been an outgrowth of the great liberalizing forces which first made themselves felt in a really determined way during this important transition century. In this chapter we shall consider briefly five important phases of this new eighteenth-century liberalism, as follows:

1. The work of the benevolent despots of continental Europe in trying to shape their governments to harmonize them with the new spirit of the century.
2. The unsatisfied demand for reform in France.
3. The rise of democratic government and liberalism in England.
4. The institution of constitutional government and religious freedom in America.
5. The sweeping away of mediæval abuses in the great Revolution in France.

[1] "The Period of the Enlightenment" had two main aims: (1) the perfection of the individual, which gave a new emphasis to education, and (2) the mastery of man over his environment, which expressed itself through the new scientific studies. In German lands elementary education, a regenerated classical education, and the *Realschule* were the fruits of this period.

I. WORK OF THE BENEVOLENT DESPOTS OF CONTINENTAL EUROPE

The new nationalism leads to interested government. In England, as we shall trace a little further on, a democratic form of government had for long been developing, but this democratic life had made but little headway on the continent of Europe. There, instead, the democratic tendencies which showed some slight signs of development during the sixteenth century had been stamped out in the period of warfare and the ensuing hatreds of the seventeenth, and in the eighteenth century we find autocratic government at its height. National governments to succeed the earlier government of the Church had developed and grown strong, the kingly power had everywhere been consolidated, Church and State were in close working alliance, and the new spirit of nationality — in government, foreign policy, languages, literature, and culture — was being energetically developed by those responsible for the welfare of the States. Everywhere, almost, on the continent of Europe, the theory of the divine right of kings to rule and the divine duty of subjects to obey seemed to have become fixed, and this theory of government the Church now most assiduously supported. Unlike in England and the American Colonies, the people of the larger countries of continental Europe had not as yet advanced far enough in personal liberty or political thinking to make any demand of consequence for the right to govern themselves. The new spirit of nationality abroad in Europe, though, as well as the new humanitarian ideas beginning to stir thinking men, alike tended to awaken a new interest on the part of many rulers in the welfare of the people they governed. In consequence, during the eighteenth century, we find a number of nations in which the rulers, putting themselves in harmony with the new spirit of the time, made earnest attempts to improve the condition of their peoples as a means of advancing the national welfare. We shall here mention the four nations in which the most conspicuous reform work was attempted.

The rulers of Prussia. Three kings, to whom the nineteenth-century greatness of Prussia was largely due, ruled the country during nearly the whole of the eighteenth century. They were fully as despotic as the kings of France, but, unlike the French kings, they were keenly alive to the needs of the people, anxious to advance the welfare of the State, tolerant in religion, and in

sympathy with the new scientific studies. The first, Frederick William I (1713–40), labored earnestly to develop the resources of the country, trained a large army, ordered elementary education made compulsory, and made the beginnings in the royal provinces of the transformation of the schools from the control of the Church to the control of the State. His son, known to history as Frederick the Great, ruled from 1740 to 1786. During his long reign he labored continually to curtail ancient privileges, abolish old abuses, and improve the condition of his people. During the first week of his reign he abolished torture in trials, made the administration of law more equitable, instituted a limited freedom for the press,[1] and extended religious toleration.[2] He also partially abolished serfdom on the royal domains, and tried to uplift the peasantry and citizen classes, but in this he met with bitter opposition from the nobles of his realm. He built roads, canals, and bridges, encouraged skilled artisans to settle in his dominions, developed agriculture and industry, encouraged scientific workers, extended an asylum to thousands of Huguenots fleeing from religious persecution in France,[3] and did more than any previous ruler to provide common schools throughout his kingdom. By the general regulation of education in his kingdom (chapter XXII) he laid the foundations upon which the nineteenth-century Prussian school system was later built.



FIG. 145. FREDERICK THE GREAT

His rule, though, was thoroughly autocratic. "Everything for the people, but nothing by the people," was the keynote of his policies. He had no confidence in the ability of the people to rule, and gave them no opportunity to learn the art. He employed the strong army his father built up to wage wars of conquest, seize territory that did not belong to him, and in conse-

[1] Frederick used to say that his subjects might think as they pleased so long as they behaved as he ordered.

[2] Though Prussia was primarily Lutheran, Catholics, Mennonites, Jews, and Huguenots early found a home in the kingdom. Frederick used to say that "all religions must be tolerated, for in this country every man must go to heaven in his own way."

[3] After the revocation of the Edict of Nantes (p. 301; 1685), over 20,000 French *Huguenots — merchants, manufacturers, skilled workmen — found an asylum in Prussia alone. Settling* in the Rhine countries, they contributed much to the future *development of this* region.

quence made himself a great German hero.[1] He may be said to have laid the foundations of modern militarized, socialized, obediently educated, and subject Germany, and also to have begun the "grand-larceny" and "scrap-of-paper" policy which has characterized Prussian international relationships ever since. Frederick William II, who reigned from 1786 to 1797, continued in large measure the enlightened policies of his uncle, reformed the tax system, lightened the burdens of his people, encouraged trade, emphasized the German tongue, quickened the national spirit, actively encouraged schools and universities, and began that centralization of authority over the developing educational system which resulted in the creation in Prussia of the first modern state school system in Europe. The educational work of these three Prussian kings was indeed important, and we shall study it more in detail in a later chapter (chapter XXII).

The Austrian reformers. Two notably benevolent rulers occupied the Austrian throne for half a century, and did much to improve the condition of the Austrian people. A very remarkable woman, Maria Theresa, came to the throne in 1740, and was followed by her son, Joseph II, in 1780. He ruled until 1790. To Maria Theresa the Austria of the nineteenth century owed most of its development and power. She worked with seemingly tireless energy for the advancement of the welfare of her subjects, and toward the close of her reign laid, as we shall see in a later chapter, the beginnings of Austrian school reform.



FIG. 146.
MARIA THERESA

Joseph II carried still further his mother's benevolent work, and strove to introduce "enlightenment and reason" into the administration of his realm. A student of the writings of the eighteenth-century reform philosophers, and deeply imbued with the reform spirit of his time, he attempted to abolish ancient

[1] "For the first time since Luther, the German people could call a great hero their own, whether they were the subjects of Frederick or not. Joyous pride in this prince, whose achievements in times of peace were no less than those in time of war, brought national consciousness to life again and this national feeling found expression in literature. It was the restoration of confidence in themselves that gave the Germans the courage to break with French rules and French models, and to seek independently after ideals of beauty. And this self-confidence they owed to Frederick *the Great.*" (*Priest, G. M., History of German Literature*, p. 116.)

privileges, establish a uniform code of justice, encourage education, free the serfs, abolish feudal tenure, grant religious toleration, curb the power of the Pope and the Church, break the power of the local Diets, centralize the State, and "introduce a uniform level of democratic simplicity under his own absolute sway." He attempted to alter the organization of the Church, abolished six hundred monasteries,[1] and reduced the number of monastic persons in his dominion from 63,000 to 27,000. Attempting too much, he brought down upon his head the wrath of both priest and noble and died a disappointed man. The abolition of feudal tenure and serfdom on the distinctively Austrian lands, of all his attempted reforms, alone was permanent. His work stands as an interesting commentary on the temporary character of the results which follow attempts rapidly to improve the conditions surrounding the lives of people, without at the same time educating the people to improve themselves.

The Spanish reformers. A very similar result attended the reform efforts of a succession of benevolent rulers thrust upon Spain, during the eighteenth century, by the complications of foreign politics. Over a period of nearly ninety years, extending from the accession of Philip V (1700) to the death of Charles III (1788), remarkable political progress was imposed by a succession of able ministers and with the consent of the kings.[2] The power of the Church, always the crying evil of Spain, was restricted in many ways; the Inquisition was curbed; the Jesuits were driven from the kingdom; the burning of heretics was stopped; prosecution for heresy was reduced and discouraged; the monastic orders were taught to fear the law and curb their passions; evils in public administration were removed; national grievances were redressed; the civil service was improved; science and literature were encouraged, in place of barren theological speculations; and an earnest effort was made to regenerate the national life and improve the lot of the common people.

All these reforms, though, were imposed from above, and no attempt was made to introduce schools or to educate the people in the arts of self-government. The result was that the reforms never went beneath the surface, and the national life of the peo-

[1] Though Joseph II claimed to be a good Catholic, he felt that monasticism had outlived its usefulness as an institution, and that its continuance was inimical to the *interests* of organized society and the State. This view has since been taken by the *rulers of every progressive* modern nation.

[2] *The Cortes, or* National Parliament, met but three times during the century, *and when it did meet* possessed but few powers and exercised but little influence.

ple remained largely untouched. Within five years of the death of Charles III all had been lost. Under a native Spanish king, thoroughly orthodox, devout, and lacking in any broad national outlook, the Church easily restored itself to power, the priests resumed their earlier importance, the nobles again began to exact their full toll, free discussion was forbidden, scientific studies were abandoned, the universities were ordered to discontinue the study of moral philosophy, and the political and social reforms which had required three generations to build up were lost in half a decade. Not meeting any well-expressed need of the people, and with no schools provided to show to the people the desirable nature of the reforms introduced, it was easy to sweep them aside. In this relapse to mediævalism, the chance for Spain — a country rich in possibilities and natural resources — to evolve early into a progressive modern nation was lost. So Spain has remained ever since, and only in the last quarter of a century has reform from within begun to be evident in this until recently priest-ridden and benighted land.

The intelligent despots of Russia. The greatest of these were Peter the Great, who ruled from 1689 to 1725, and Catherine II, who ruled from 1762 to 1796. Catching something of the new eighteenth-century western spirit, these rulers tried to introduce some western enlightenment into their as yet almost barbarous land. Each tried earnestly to lift their people to a higher level of living, and to start them on the road toward civilization and learning. By a series of edicts, despotically enforced, Peter tried to introduce the civilization of the western world into his country. He brought in numbers of skilled artisans, doctors, merchants, teachers, printers, and soldiers; introduced many western skills and trades; and made the beginnings of western secondary education for the governing classes by the establishment in the cities of a number of German-type *gymnasia*.[1] Later Catherine II had the French philosopher Diderot (p. 482) draw up a plan for her for the organization of a state system of higher schools, but the plan was never put into effect. The beginnings of Russian higher civilization really date from this eighteenth-century work. The power of the formidable Greek or Eastern Church remained, however, untouched, and this continued, until after the Russian revolution of 1917, as one of the most serious obstacles to Russian

[1] The first Russian university was established at Kiev, in 1588; the second at Dorpat, in 1632; the third at Moscow, in 1755; and the fourth at Kasan, in 1804. *The University of Petrograd* dates from 1819.

intellectual and educational progress. The serfs, too, remained serfs — tied to the land, ignorant, superstitious, and obedient.

By the close of the eighteenth century Russia, largely under Prussian training, had become a very formidable military power, and by the close of the nineteenth century was beginning to make some progress of importance in the arts of peace. Just at present Russia is going through a stage of national evolution quite comparable to that which took place in France a century and a quarter ago, and the educational importance of this great people, as we shall point out further on, lies in their future evolution rather than in any contribution they have as yet made to western development.

II. THE UNSATISFIED DEMAND FOR REFORM IN FRANCE

The setting of eighteenth-century France. Eighteenth-century France, on the contrary, developed no benevolent despot to mitigate abuses, reform the laws, abolish privileges, temper the rule of the Church,[1] (**R. 247**), curb the monastic orders, develop the natural resources, begin the establishment of schools, and alleviate the hard lot of the serf and the peasant. There, instead, absolute monarchy in Europe reached its most complete triumph during the long reigns of Louis XIV (1643–1715) and Louis XV (1715–74), and the splendor of the court life of France captivated all Europe and served to hide the misery which made the splendor possible. There the power of the nobles had been completely broken, and the power of the parliaments completely destroyed. "I am the State," exclaimed Louis XIV, and the almost unlimited despotism of the King and his ministers and favorites fully supported the statement. Local liberties had been suppressed, and the lot of the common people — ignorant, hard-working, downtrodden, but intensely patriotic — was wretched in the extreme. Approximately 140,000 nobles[2] and 130,000 monks, nuns, and clergy owned two fifths of the landed property of France, and controlled the destinies of a nation of approximately 25,000,000 people. Agriculture was the great industry of the time, but this

[1] The great difference between a church and true religion must always be kept in mind. Religion is a thing of the spirit, and its principle represents the loftiest thoughts of the race; a church is a human governing institution, and clearly subject to its own ambitions and the human frailties of its age.

[2] That is, 25,000 to 30,000 families. There were also, in even numbers, 83,000 monks in 2500 monasteries (one for every ninety square miles in France), 37,000 *nuns in 1500 convents*, and 60,000 priests. Of the soil of France, the King and *towns owned one fifth*, the clergy and the monks one fifth, the nobility one fifth, the *bourgeoisie one fifth*, and the peasantry one fifth.

was so taxed by the agents of King and Church that over one half of the net profits from farming were taken for taxation.

Church and State were in close working alliance. The higher offices of the Church were commonly held by appointed noblemen, who drew large incomes,[1] led worldly lives, and neglected their priestly functions much as the Italian appointees in German lands had done before the Reformation. Between the nobles and upper clergy on the one hand and the peasant-born lower clergy and the masses of the people on the other a great gulf existed. The real brains of France were to be found among a small bourgeois class of bankers, merchants, shopkeepers, minor officials, lawyers, and skilled artisans, who lived in the cities and who, ambitious and discontented, did much to stimulate the increasing unrest and demand for reform which in time pervaded the whole nation. A king, constantly in need of increasing sums of money; an idle, selfish, corrupt, and discredited nobility and upper clergy, incapable of aiding the king, many of whom, too, had been influenced by the new philosophic and scientific thinking and were willing to help destroy their own orders; an aggressive, discontented, and patriotic bourgeoisie, full of new political and social ideas, and patriotically anxious to reform France; and a vast unorganized peasantry and city rabble, suffering much and resisting little, but capable of a terrible fury and senseless destruction, once they were aroused and their suppressed rage let loose; — these were the main elements in the setting of eighteenth-century France.

The French reform philosophers. During the middle decades of the eighteenth century a small but very influential group of reform philosophers in France attacked with their pens the ancient abuses in Church and State, and did much to pave the way for genuine political and religious reform. In a series of widely read articles and books, characterized for the most part by clear reasoning and telling arguments, these political philosophers attacked the power of the absolute monarchy on the one hand, and the existing privileges of the nobles and clergy on the other, as both unjust and inimical to the welfare of society (**R. 248**). The leaders in the reform movement were Montesquieu (1689–

[1] In 1788 the 131 bishops and archbishops of France had an average income of 100,000 francs, and 33 abbots and 27 abbesses had incomes ranging from 80,000 to 500,000 francs. The Cardinal de Rohan, Archbishop of Strasbourg, had an income of more than 1,000,000 francs, and the 300 Benedictine monks at Cluny had an income of more than 1,800,000 francs.

1755), Turgot (1727–81), Voltaire (1694–1778), Diderot (1713–84), and Rousseau (1712–78).

Montesquieu. In 1748 appeared Montesquieu's famous book, the *Spirit of Laws.* In this he pointed out the many excellent features of the constitutional government which the English had developed, and compared English conditions with the many abuses to which the French people were subject. He argued that laws should be expressive of the wishes and needs of the people governed, and that the education of a people "ought to be relative to the principles of good government." Montesquieu also stands, with Turgot as the founder of the sciences of comparative politics [1] and the philosophy of history — new studies which helped to shape the political thinking of eighteenth-century France.



FIG. 147. MONTESQUIEU (1689–1755)

Turgot. Two years after the publication of Montesquieu's book, Turgot delivered (1750) a series of lectures at the Sorbonne, in Paris, in which he virtually created the science of history. Looking at human history comprehensively, seeing clearly that there had been a hitherto unrecognized regularity of march amid the confusion of the past, and that it was possible to grasp the history of the progress of man as a whole, he saw and stated the possibility of society to improve itself through intelligent government, and the need for wise laws and general education to enable it to do so.[2]

[1] "The real importance of *Esprit des lois* is not that of a formal treatise on law, or even on polity. It is that of an assemblage of the most fertile, original, and inspiriting views on legal and political subjects, put in language of singular suggestiveness and vigour, illustrated by examples which are always apt and luminous, permeated by the spirit of temperate and tolerant desire for human improvement and happiness, and almost unique in its entire freedom at once from doctrinairism, visionary enthusiasm, egotism, and an undue spirit of system. The genius of the author for generalization is so great, his instinct in political science so sure, that even the falsity of his premises frequently fails to vitiate his conclusions." (Saintsbury, George, in *Encyclopædia Britannica*, vol. XVIII, p. 777.)

[2] "By the captivating prospects which he held out of future progress, and by the picture which he drew of the capacity of society to improve itself, Turgot increased the impatience which his countrymen were beginning to feel against the despotic government, in whose presence amelioration seemed to be hopeless. These, and similar speculations of the time, stimulated the activity of the intellectual classes, cheered them under the persecutions to which they were exposed, and emboldened them to attack the institutions of their native land." (Buckle, H. T., *History of Civilisation in England*, vol. I, p. 597.)

In 1774 Turgot was appointed Minister of Finance by the new King, Louis XVI, and during the two years before he was removed



FIG. 148. TURGOT
(1727–81)



FIG. 149. VOLTAIRE
(1694–1778)

from office he attempted to carry out many needed political and social reforms. Duruy [1] has summarized his suggested reforms as follows:

1. Gradual introduction of a complete system of local self-government.
2. Imposition of a land tax on nobility and clergy.
3. Suppression of the greater part of the monasteries.
4. Amelioration of the condition of the minor clergy.
5. Equalization of the burdens of taxation.
6. Liberty of conscience, and the recall of the Protestants to France.
7. A uniform system of weights and measures.
8. Freedom for commerce and industry.
9. A single and uniform code of laws.
10. A vast plan for the organization of a system of public instruction throughout France.

This list is indicative of the reform philosophy in the light of which he worked. Arousing the natural hostility of the nobility and higher clergy, he was soon dismissed, and the reforms he had proposed were abandoned by the King.

Voltaire. The keenest and most unsparing critic of the old order was Voltaire. In clear and forceful French he exposed existing conditions in society and government, and particularly the control of affairs exercised by the most ancient and most

[1] *Duruy, V., History of France,* p. 523.

powerful organization of his day — the Church. For this he was execrated and hated by the clergy, and in return he made it the chief task of his life to destroy the reign of the priest. Having lived for a time in England, he appreciated the vast difference between the English and French forms of government. With a keen and unsparing pen he exposed the scholasticism, despotism, dogmatism, superstition, hypocrisy, servility, and deep injustice of his age, and poured out the vials of his scorn upon the grubbing pedantry of the Academicians who doted upon the past because ignorant of the present. In particular he stood for the abolition of that relic of feudalism — serfdom — which still seriously oppressed the peasantry of France; for liberty in thought and action for the individual; for curbing the powers and privileges of both State and Church; for an equalization of the burdens of taxation between the different classes in French society; and for the organization of a system of public education throughout the nation. He died before the outbreak of the Revolution he had done so much to bring about, but by the time he died the "Ancient Régime" of privilege and corruption and oppression was already tottering to its fall. His conception of the relations that should exist between Church and State are well set forth in a short article from his pen on the subject (**R. 248**) reprinted from the *Encyclopædia* of Diderot.

Diderot. Another able thinker and writer was Diderot. Besides other works of importance, he gave twenty years of his life (1751–72) to the editing (with D'Alembert) of an *Encyclopædia* of seventeen volumes of text and eleven of plates. Many of the articles were written by himself, and were expressive of his ideas as to reform. Many were frankly critical of existing privileges, abuses, and pretensions. Many interpreted to the French the science of Newton and the discoveries of the age, and awakened a new interest in scientific study. Because of its reform ideas the publication was suppressed, in 1759, after the publication of the seventh volume, and had to be carried on surreptitiously thereafter. Viscount Morley, writing recently on Diderot, summarizes the nature and influence of the *Encyclopædia in the* following words:



FIG. 150. DIDEROT (1713–84)

The ecclesiastical party detested the Encyclopædia, in which they

saw a rising stronghold for their philosophical enemies. To any one who turns over the pages of these redoubtable volumes now, it seems surprising that their doctrine should have stirred such portentous alarm. There is no atheism, no overt attack on any of the cardinal mysteries of the faith, no direct denunciation even of the notorious abuses of the Church. Yet we feel that the atmosphere of the book may well have been displeasing to authorities who had not yet learnt to encounter the modern spirit on equal terms. The *Encyclopædia* takes for granted the justice of religious toleration and speculative freedom. It asserts in distinct tones the democratic doctrine that it is the common people in a nation whose lot ought to be the chief concern of the nation's government. From beginning to end it is one unbroken process of exaltation of scientific knowledge on the one hand, and pacific industry on the other. All these things were odious to the old governing classes of France.[1]

Rousseau. The fifth reform writer mentioned as exercising a large influence was Rousseau. In 1749 the Academy at Dijon offered a prize for the best essay on the subject: *Has the progress of the sciences and arts contributed to corrupt or to purify morals?* Rousseau took the negative side and won the prize. His essay attracted widespread attention. In 1753 he competed for a second prize on *The Origin of Inequality among Men*, in which he took the same negative attitude. In 1762 appeared both his *Social Contract* and *Émile*. In the former he contended that early men had given to selected leaders the right to conduct their government for them, and that these had in time become autocratic and had virtually enslaved the people (**R. 249 a**). He held that men were not bound to submit to government against their wills, and to remedy existing abuses he advocated the overthrow of the usurping government and the establishment of a republic, with universal suffrage based on "liberty, fraternity, and equality." The ideal State lay in a society controlled by the people, where artificiality and aristocracy and the tyranny of society over man did not exist. Nor could Rousseau distinguish between political and ecclesiastical tyranny, holding that the former inevitably followed from the latter (**R. 249 b**).

Crude as were his theories, and impractical as were many of his ideas, to an age tired of absurdities and pretensions and injustice, and suffering deeply from the abuses of both Church and State, his attractively written book seemed almost inspired. The *Social Contract* virtually became the Bible of the French Revolutionists. In the *Émile*, a book which will be referred to more at

[1] *Encyclopædia Britannica*, 11th ed., vol. VIII, p. 204.

length in chapter XXI, Rousseau held that we should revert, in education, to a state of nature to secure the needed educational reforms, and that education to prepare for life in the existing society was both wrong and useless.

A revolution in French thinking. These five men — Montesquieu, Turgot, Voltaire, Diderot, and Rousseau — and many other less influential followers, portrayed the abuses of the time in Church and State and pointed out the lines of political and ecclesiastical reform. Those who read their writings understood better why the existing privileges of the nobility and clergy were no longer right, and the need for reform in matters of taxation and government. Their writings added to the spirit of unrest of the century, and were deeply influential, not only in France, but in the American Colonies as well. Though the attack was at first against the evils in Church and State, the new critical philosophy soon led to intellectual developments of importance in many other directions.

At the death of Louis XIV (1715) France was intellectually prostrate. Great as was his long reign from the point of view of the splendor of his court, and large as was the quantity of literature produced, his age was nevertheless an age of misery, religious intolerance, political oppression, and intellectual decline. It was a reign of centralized and highly personal government. Men no longer dared to think for themselves, or to discuss with any freedom questions either of politics or religion. "There was no popular liberty; there were no great men; there was no science; there was no literature; there were no arts. The largest intellects lost their energy; the national spirit died away." Between the death of Louis XIV and the outbreak of the French Revolution (1789) an intellectual revolution took place in France, and for this revolution English political progress and political and scientific thinking were largely responsible.

Great English influence on France. In 1715 the English language was almost unspoken in France, English science and political progress were unknown there, and the English were looked down upon and hated. Half a century later English was spoken everywhere by the scholars of the time; the English were looked upon as the political and scientific leaders of Europe; and the scholars of France visited England to study English political, *economic, and* scientific progress. Locke, an uncompromising *advocate of* political and religious liberty; Hobbes, the specula-

tive moral philosopher; and the great scientist Newton were the teachers of Voltaire. More than any other single man, Voltaire moulded and redirected eighteenth-century thought in France.[1] Numerous French writers of importance — Helvetius, Diderot, Morellet, Voltaire, Rousseau, to mention but a few — drew their inspiration from English writers. In the eighteenth century England became the school for political liberty for France.[2]

The effect of the work of Isaac Newton (p. 388), as popularized by the writings of Voltaire, was revolutionary on a people who had been so tyrannized over by the clergy as had the French during the reign of Louis XIV. An interest in scientific studies before unknown in France now flamed up, and a new generation of French scientists arose. Physics, chemistry, zoölogy, and anatomy received a great new impetus, while botany, geology, and mineralogy were raised to the rank of sciences. Popular scientific lectures became very common. The classics were almost abandoned for the new studies.

Economic questions now also began to be discussed, such as questions of money, food, finance, and government expenditure. In 1776 the Englishman, Adam Smith, laid the foundations of the new science of political economy by the publication of his *Wealth of Nations*, and this was at once translated into French and eagerly read. In 1781 a French banker by the name of Necker published his *Compte Rendu*, a statistical report on the finances of France. So feverishly eager were men to study problems of government that six thousand copies were sold the day it was published, and eighty thousand had to be printed before the demand for it was satisfied. A half-century earlier it would have been read scarcely at all.

[1] "The real king of the eighteenth century was Voltaire; but Voltaire, in his turn, was a pupil of the English. Before Voltaire became acquainted with England, through his travels and his friendships, he was not Voltaire, and the eighteenth century was still undeveloped." (Cousin, *History of Philosophy*.)

[2] "The first Frenchmen who in the eighteenth century turned their attention to England were amazed at the boldness with which, in that country, political and religious questions of the deepest moment were discussed — questions which no Frenchman in the preceding age had dared to broach. With wonder they discovered in England a comparative freedom of the public press, and saw with astonishment how in Parliament itself the government of the Crown was attacked with impunity, and the management of its revenues actually kept under control. To see the civilization and prosperity of England increasing, while the power of the upper classes and the King diminished, was to them a revelation. . . . England, said Helvetius, is a country where the people are respected, a country where each citizen has a part in the management of affairs, where men of genius are allowed to enlighten the public upon its true interests." (Dabney, R. H., *Causes of the French Revolution*, *p. 141.*)

In the meantime taxes piled up, reforms were refused, the power and arrogance of the clergy and nobility showed no signs of diminution, the nation was burdened with debt, commerce and agriculture declined, the lot of the common people became ever more hard to bear, and the masses grew increasingly resentful and rebellious. As national affairs continued to drift from bad to worse in France, a series of important happenings on the American continent helped to bring matters more rapidly to a crisis. Before describing these events, however, we wish to sketch briefly the rise of government by the people and the extension of liberalism in England — the first great democratic nation of the western world.

III. ENGLAND THE FIRST DEMOCRATIC NATION

Early beginnings of English liberty. The first western nation created from the wreck of the Roman Empire to achieve a measurement of self-government was England. Better civilized than most of the other wandering tribes, at the time of their coming to English shores, the invading Angles, Saxons, and Jutes early accepted Christianity (p. 120) and settled down to an agricultural life. On English shores they soon built up a for-the-time substantial civilization. This was later largely destroyed by the pillaging Danes, but with characteristic energy the English set to work to assimilate the newcomers and build up civilization anew. The work of Alfred (p. 146) in reëstablishing law and order, at a time when law and order scarcely existed anywhere in western Europe, will long remain famous. Later on, and at a time when German and Hun and Slav had only recently accepted Christianity in name and had begun to settle down into rude tribal governments, and when the Prussians in their original home along the eastern Baltic were still offering human sacrifices to their heathen gods (p. 120), the English barons were extorting *Magna Charta* from King John and laying the firm foundations of English constitutional liberty. In the meadow at Runnymede, on that justly celebrated June day, in 1215, government under law and based on the consent of the governed began to shape itself once more in the western world. Of the sixty-three articles of this Charter of Liberties, three possess imperishable value. These provided:

1. That no free man shall be imprisoned or proceeded against except *by his peers*, or the law of the land, which secured trial by jury.
2. *That justice* should neither be sold, denied, nor delayed.

3. That dues from the people to the king could be imposed only with the consent of the National Council (after 1246 known as Parliament).

So important was this charter to such a liberty-loving people as the English have always been, and so bitterly did kings resent its hampering provisions, that within the next two centuries kings had been forced to confirm it no less than thirty-seven times.

By 1295 the first complete Parliament, representative of the three orders of society — Lords, Clergy, and Commons — assembled, and in 1333 the Commons gained the right to sit by itself. From that time to the present the Commons, representing the people, has gradually broadened its powers, working, as Tennyson has said,[1] "from precedent to precedent," until to-day it rules the English nation. In 1376 the Commons gained the right to impeach the King's ministers, and in 1407 the exclusive right to make grants of money for any governmental purpose. Centuries ahead of other nations, this insured an almost continual meeting of the national assembly and a close scrutiny of the acts of both kings and ministers.

In 1604 King James I, imitating continental European precedents, proclaimed his theory as to the "divine right of kings" to rule,[2] and a struggle at once set in which carried the English into Civil War (1642–49); led to the beheading of Charles I (1649); the overthrow and banishment of James II (1688); and the ultimate firm establishment, instead, of the "divine right of the common people."[3] In an age when the autocratic power and the

[1] Tennyson, in his "You ask me why," well describes the growth of constitutional liberty in England when he says that England is:

"A land of settled government,
A land of just and old renown,
Where freedom broadens slowly down,
From precedent to precedent."

[2] James I, in 1604, had declared: "As it is atheism to dispute what God can do, so it is presumption and a high contempt in a subject to dispute what a king can do." For this attitude the Commons continually contested his authority, his son lost his crown and his head, and his grandson was driven from the throne and from England. By contrast, and as showing the different attitude toward self-government of the two peoples, the German Emperor William II, three centuries later, so continually boasted of his rule by divine right that "Me and God" became an international joke, and to his assumption the German people took little or no exception.

[3] The passage of the Bill of Rights (1689) ended the divine-right-of-kings idea in England for all time. This prohibited the King from keeping a standing army in times of peace, gave every subject the right to petition for a redress of grievances, gave Parliament the right of free debate, prohibited the King from interfering in any way with the proper execution of the laws, declared that members ought to be elected to Parliament without interference, and gave the Commons control of all forms of taxation.

divine right of kings to rule was almost unquestioned elsewhere in Europe, the English people compelled their king to recognize that he could rule over them only when he ruled in their interests and as they wished him to do. Though there was a period of struggle later on with the German Georges (I, II, and III), and especially with the honest but stupid George III, England has, since 1688, been a government of and by the people.[1] France did not rid itself of the "divine-right" conception until the French Revolution (1789), and Germany, Austria, and Russia not until 1918.

Growth of tolerance among the English. The results of the long struggle of the English for liberty under law showed itself in many ways in the growth of tolerance among the people of the English nation. At a time when other nations were bound down in blind obedience to king and priest, and when dissenting minorities were driven from the land, the English people had become accustomed to the idea of individual liberty, regulated by law, and to the toleration of opinions with which they did not agree. These characteristically English conceptions of liberty under law and of the toleration of minorities have found expression in many important ways in the life and government of the people (**R. 250**), and have been elements of great strength in England's colonial policy. One of the important ways in which this growth of tolerance among the English showed itself was in the extension of a larger freedom to those unable to subscribe to the state religion.

Though the Reformation movement had stirred up bitter hatreds in England, as on the Continent, the English were among the first of European peoples to show tolerance of opposition in religious matters. The high English State Church, which had succeeded the Roman, had made but small appeal to many Englishmen. The Puritans had early struggled to secure a simplification of the church service and the introduction of more preaching (p. 359), and in the seventeenth century the organization of three additional dissenting sects, which became known as Unitarians, Baptists, and Quakers, took place. These sects divided off rather quietly, and their separation resulted only in the enactment of new laws regarding conformity, prayers, and teaching.

[1] Though the English first developed regulated or constitutional government, they themselves have no single written constitution. Instead, the foundations of *English* constitutional government rest on *Magna Charta* (1215), the Petition of *Rights (1628)*, and the Bill of Rights (1689), these three constituting "the Bible of *English Liberty.*"

During the latter half of the seventeenth century, after the execution of Charles I (1649), the Puritans had temporarily risen to power, and during their control of affairs had imposed their strict Calvinistic standards as to Sabbath observance and piety on the nation. This was very distasteful to many, and from such strict observances the people in time rebelled. The standards of the English in personal morality, temperance, amusements, and manners at the beginning of the eighteenth century were not especially high, and in the reaction from Puritan control and strict religious observances the great mass of the people degenerated into positive irreligion and gross immorality. Drunkenness, rowdyism, robbery, blasphemy, brutality, lewdness, and prostitution became very common. This moral decline of the people the Church of England seemed powerless to arrest.

About 1730 a reform movement was begun under the able leadership of a young Oxford student by the name of John Wesley, ably seconded by George Whitefield (1714–70), with a view to reaching the classes so completely untouched by the high State Church. By traveling over the country and preaching a gospel of repentance, personal faith, and better living, these two young men made a deep emotional appeal, and soon gained a strong hold on the poorer and more ignorant classes of the people. Forbidden to preach in Anglican churches, and at times threatened with personal violence, these two men were in time forced into open rebellion against the Established Church. Finally they founded a new Church, which became known as the Methodist.[1] This new organization bore the same relation to the Church of England that the Anglican Church two hundred years before had borne to the Church of Rome. Thus was accomplished a second spiritual reformation in England, and one destined in time to spread to the colonies and deeply affect the lives of a large portion of the English people.[2] That such a well-



FIG. 151. JOHN WESLEY (1707–82)
Founder of Methodism

[1] At first used as a term of ridicule, from the very methodical manner in which the Wesleyans organized their campaigns.

[2] "If we except the great Puritan movement of the seventeenth century, no such appeal had been heard since the days when Augustine and his band of monks landed in Kent and set forth on their mission among the barbarous Saxons. The results *answered fully to the zeal* that awakened them. Better than the growing prosper-

organized sect could arise, such a moral reformation be preached, and the power of the Established Church be challenged so openly and without serious persecution, speaks much for the growth of religious tolerance among the English people since the days of the great Elizabeth. In 1778 the Roman Catholic Relief Act was adopted, and in 1779 dissenting ministers and schoolmasters were relieved from the disabilities under which they had so long remained. These acts indicate a further marked growth in religious tolerance on the part of the English nation.[1]

New emancipating and educative influences. In 1662 the first regular newspaper outside of Italy was established in England, and in 1702 the first daily paper. Small in size, printed on but one side of the sheet, and dealing wholly with local matters, these nevertheless marked the beginnings of that daily expression of popular opinion with which we are now so familiar.[2] After about 1705 the cheap political pamphlet made its appearance, and after 1710, instead of merely communicating news, the papers began the discussion of political questions.

By 1735 a revolution had been effected in England, and papers and presses began to be established in the chief cities and towns outside of London; the freedom of the press was in a large way

ity of extending commerce, better than all the conquests of the East or the West, was the new religious spirit which stirred the people of both England and America, and provoked the National Church to emulation in good works — which planted schools, checked intemperance, and brought into vigorous activity all that was best and bravest in a race that when true to itself is excelled by none." (Montgomery, D. H., *English History*, p. 322.)

[1] The contrast between eighteenth-century England and France, in the matter of religious liberty, is interesting. In France the Church took care, during the whole of the eighteenth century, that the persecution process should go on. "In 1717 an assembly of seventy-four Protestants having been surprised at Andure, the men were sent to the galleys and the women to prison. An edict of 1724 declared that all who took part in a Protestant meeting, or who had any direct or indirect communication with a Protestant preacher, should have their heads shaved and be imprisoned for life, and the men condemned to perpetual servitude in the galleys. In 1745 and 1746, in the province of Dauphine, 277 Protestants were condemned to the galleys and a number of women flogged. From 1744 to 1752 six hundred Protestants in the east and south of France were condemned to various punishments. In 1774 the children of a Calvinist of Rennes were taken from him. Up to the very eve of the Revolution Protestant ministers were hanged in Languedoc, and dragoons were sent against their congregations." (Dabney, R. H., *Causes of the French Revolution*, p. 42.)

[2] Back as early as 1695 the Commons had refused to renew the press-licensing act, enacted in 1637, to control heresy. This had confined printing to London, Oxford, and Cambridge, and to twenty master printers and four letter founders for the realm. This refusal marks the beginning of the freedom of the press in England. In 1709 the copyright law was enacted, and in 1776 the redress against publishers of libelous articles was confined to the ordinary courts of law. A century ahead of France, and more than two centuries ahead of Teutonic and Romanic lands, England provided for a free press and open discussion.

completed, and newspapers, for the first time in the history of the world, were made the exponents of public opinion. The press in England in consequence became an educative force of great intellectual and political importance, and did much to compensate for the lack of a general system of schools for the people. In 1772 the right to publish the debates in Parliament was finally won, over the strenuous objections[1] of George III. In 1780 the first Sunday newspaper appeared, "on the only day the lower orders had time to read a paper at all," and, despite the efforts of religious bodies to suppress it, the Sunday paper has continued to the present and has contributed its quota to the education and enlightenment of mankind. In 1785 the famous London *Times* began to appear. In the middle of the eighteenth century debating societies for the consideration of public questions arose, and in 1769 "the first public meeting ever assembled in England, in which it was attempted to enlighten Englishmen respecting their political rights" was held, and such meetings soon became of almost daily occurrence. All these influences stimulated political thinking to a high degree, and contributed not only to a desire for still larger political freedom but for the more general diffusion of the ability to read as well (**R. 250**).

Still other important new influences arose during the early part of the eighteenth century, each of which tended to awaken new desires for schools and learning. In 1678 the first modern printed story to appeal to the masses, Bunyan's *Pilgrim's Progress*, appeared from the press. Written, as it had been, by a man of the people, its simple narrative form, its passionate religious feeling, its picture of the journey of a pilgrim through a world of sin and temptation and trial, and its Biblical language with which the common people had now become familiar — all these elements combined to make it a book that appealed strongly to all who read or heard it read, and stimulated among the masses a desire to read comparable to that awakened by the chaining of the English Bible in the churches a century before (**R. 170**). In 1719 the first great English novel, Defoe's *Robinson Crusoe*, and in 1726 *Gulliver's Travels*, added new stimulus to the desires awakened by Bunyan's book. All three were books of the common

[1] George III, always consistently wrong, opposed this extension of popular rights. In 1771 he wrote the Prime Minister, Lord North: "It is highly necessary that this strange and lawless method of publishing debates in the papers should be put a stop to. But is not the House of Lords the best court to bring such miscreants before; as it can *fine, as well as imprison*, and has broader shoulders to support the odium *of so salutary a measure.*"

people, whereas the dramas, plays, essays, and scholarly works previously produced had appealed only to a small educated class. In 1751 what was probably the first circulating library of modern times was opened at Birmingham, and soon thereafter similar institutions were established in other English cities.

Science and manufacturing; the new era. England, too, from the first, showed an interest in and a tolerance toward the new scientific thinking scarcely found in any other land. This in itself is indicative of the great intellectual progress which the English people had by this time made.[1] At a time when Galileo, in Italy (p. 388), was fighting, almost alone, for the right to think along the lines of the new scientific method and being imprisoned for his pains, Englishmen were reading with deep interest the epoch-making scientific writings of Lord Francis Bacon (p. 390). Earlier than in other lands, too, the Newtonian philosophy found a place in the instruction of the national universities (p. 423), and English scholars began to employ the new scientific method in their search for new truths. The British Royal (Scientific) Society [2] had begun to meet as early as 1645, and ever since has published in its proceedings the best of English scientific thinking. By the reign of George I (1714–27) scientific work began to be popularized, and the first little booklets on scientific subjects began to appear. These popular presentations of what had been worked out were sold at the book stalls and by peddlers and were eagerly read; by the beginning of the reign of George III (1760) they had become very common. In 1704–10 the first "Dictionary of Arts and Sciences" was printed, and in 1768–71 the first edition (three volumes) of the now famous *Encyclopædia Britannica* appeared. In 1755 the famous British Museum was founded.

[1] "It is evident that a nation perfectly ignorant of physical laws will refer to supernatural causes all the phenomena by which it is surrounded. But as soon as natural science begins to do its work there are introduced the elements of a great change. Each successive discovery, by ascertaining the law that governs events, deprives them of that apparent mystery in which they were formerly involved. The love of the marvelous becomes proportionally diminished; and when any science has made such progress as to enable it to foretell the events with which it deals, it is clear that the whole of those events are at once withdrawn from the jurisdiction of the supernatural, and brought under the authority of natural powers. . . . Hence it is that, supposing other things equal, the superstition of a nation must always bear an exact proportion to the extent of its physical knowledge." (Buckle, H. T., *History of Civilization in England*, vol. I, p. 269.)

[2] The Charter of this Society stated the purpose to be to increase knowledge by direct experiment, and that the object of the Society was the extension of natural knowledge, as opposed to that which is supernatural. As an institution embodying the idea of intellectual progress it was most bitterly assailed by partisans of the old thinking.

As early as 1698 a rude form of steam engine had been patented in England, and by 1712 this had been perfected sufficiently to be used in pumping water from the coal mines. In 1765 James Watt made the real beginning of the application of steam to industry by patenting his steam engine; in 1760 Wedgwood established the pottery industry in England; in 1767 Hargreaves devised the spinning-jenny, which banished the spindle and distaff and the old spinning-wheel; in 1769 Arkwright evolved his spinning-frame; and in 1785 Cartwright completed the process by inventing the power loom for weaving. In 1784 a great improvement in the smelting of iron ores (puddling) was worked out. These inventions, all English, were revolutionary in their effect on manufacturing. They meant the displacement of hand power by machine labor, the breakdown of home industry through the concentration of labor in factories, the rise of great manufacturing cities,[1] and the ultimate collapse of the age-old apprenticeship system of training, where the master workman with a few apprentices in his shop (p. 210) prepared goods for sale. They also meant the ultimate transformation of England from an agricultural into a great manufacturing and exporting nation, whose manufactured products would be sold in every corner of the globe.

By 1750 a change in attitude toward all the old intellectual problems had become marked in England, and by 1775 attention before unknown was being given there to social, political, economic, and educational questions. Religious intolerance was dying out, the harsh laws of earlier days had begun to be modified, new social and political interests[2] were everywhere attracting attention, and the great commercial expansion of England was rapidly taking shape. With England and France leading in the new scientific studies; England in the van in the development of manufacturing and the French to the fore in social influences and polite literature; England and the new American Colonies setting new standards in government by the people; the French

[1] Birmingham, Sheffield, Leeds, and Manchester, for example, great manufacturing cities early in the nineteenth century, were insignificant villages in Cromwell's day. The steam engine made the coal and iron deposits of northern England of immense value, and the "smoky mill towns" that arose in the north began to displace southern agricultural England in population, wealth, and importance.

[2] For example, in 1774 John Howard began his great work in prison reform; in 1772 pressing to death was abolished; in 1780 the ducking-stool was used for the last time; and soon thereafter the earlier laws relating to the death penalty were modified, and the slave trade abolished. Up to the middle of the eighteenth century as many as one hundred and sixty offenses were punishable by death.

theorists and economists giving the world new ideas as to the function of the State; enlightened despots on the thrones of Prussia, Austria, Spain, and Russia; and the hatreds of the hundred years of religious warfare dying out; the world seemed to many, about 1775, as on the verge of some great and far-reaching change in methods of living and in government, and about ready to enter a new era and make rapid advances in nearly all lines of human activity. The change came, but not in quite the manner expected.

IV. INSTITUTION OF CONSTITUTIONAL GOVERNMENT AND RELIGIOUS FREEDOM IN AMERICA

Englishmen in America establish a Republic. Though the early settlement of America, as was pointed out in chapter XV, was made from among those people and from those lands which had embraced some form of the Protestant faith, and represented a number of nationalities and several religious sects, the thirteen colonies, nevertheless, were essentially English in origin, speech, habits, observances, and political and religious conceptions. This is well shown for the white population by the results of the first Federal census, taken in 1790, as given in the adjoining figure. This shows that of all the people in the thirteen original States, 83.5 per cent possessed names indicating pure English origin, and that 91.8 per cent had names which pointed to their having come from the British Isles. The largest non-British name-nationality was the German, with 5.6 per cent of the whole, and these were found chiefly in Pennsylvania where they constituted 26.1 per cent of the State's population. Next were those having Dutch names, who constituted but 2 per cent of *the total population*, and but 16.1 per cent of the population *of New York*. No other name-nationality constituted over one

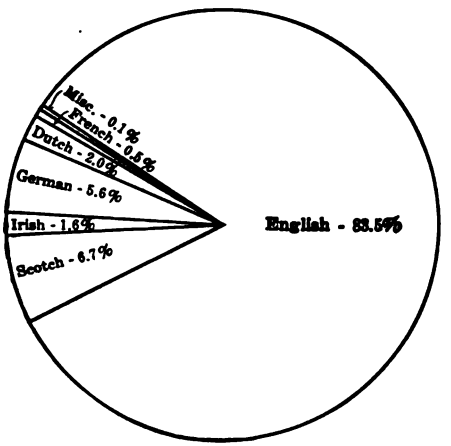


FIG. 152. NATIONALITY OF THE WHITE POPULATION, AS SHOWN BY THE FAMILY NAMES IN THE CENSUS OF 1790

half of one per cent of the total. The New England States were almost as English as England itself, 93 to 96 per cent of the names being pure English, and 98.5 to 99.8 per cent being from the British Isles.

We thus see that it was from England, the nation which had done most in the development of individual and religious liberty, that the great bulk of the early settlers of America came, and in the New World the English traditions as to constitutional government and liberty under law were early and firmly established. The centuries of struggle for representative government in England at once bore fruit here. Colony charters, charters of rights and liberties, public discussion, legislative assemblies, and liberty under law were from the first made the foundation stones upon which self-government in America was built up.

From an early date the American Colonies showed an independence to which even Englishmen were scarcely accustomed, and when the home government attempted to make the colonists pay some of the expenses of the Seven Years' War, and a larger share of the expenses of colonial administration, there was determined opposition. Having no representation in Parliament and no voice in levying the tax, the colonists declared that taxation without representation was tyranny, and refused to pay the taxes assessed. Standing squarely on their rights as Englishmen, the colonists were gradually forced into open rebellion. In 1765, and again in 1774, Declarations of Rights were drawn up and adopted by representatives from the Colonies, and were forwarded to the King. In 1774 the first Continental Congress met and formed a union of the Colonies; in 1776 the Colonies declared their independence. This was confirmed, in 1783, by the Treaty of Paris; in 1787, the Constitution of the United States was drafted; and in 1789, the American government began. In the preamble to the twenty-seven charges of tyranny and oppression made against the King in the Declaration of Independence, we find a statement of political philosophy [1] which is a combination of the results of the long English struggle for liberty and the French eighteenth-century reform philosophy and revolutionary demands.[2] This preamble declared:

[1] The Declaration of Independence was written by Thomas Jefferson, a great admirer of French life and a propagandist for French ideas.

[2] Compare the American preamble with the following sentence from the *Social Contract* (Book I, chap. ix) of Rousseau:

"*I shall close this* chapter and this book with a remark which ought to serve as a

We hold these truths to be self-evident — that all men are created equal; that they are endowed by their Creator with certain unalienable rights; that among these are life, liberty, and the pursuit of happiness. That, to secure these rights, governments are instituted among men, deriving their just powers from the consent of the governed; that, whenever any form of government becomes destructive of these ends, it is the right of the people to alter or to abolish it, and to institute a new government, laying its foundation on such principles, and organizing its powers in such form, as to them shall seem most likely to effect their safety and happiness.

American contributions to world history. The American Revolution and its results were fraught with great importance for the future political and educational progress of mankind. Before the close of the eighteenth century the new American government had made at least four important contributions to world liberty and progress which were certain to be of large political and educational value for the future.

In the first place, the people of the Colonies had erected independent governments and had shown the possibility of the self-government of peoples on a large scale, and not merely in little city-states or communities, as had previously been the case where self-government had been tried. Democratic government was here worked out and applied to large areas, and to peoples of diverse nationalities and embracing different religious faiths. The possibility of States selecting their rulers and successfully governing themselves was demonstrated.

In the second place, the new American government which was formed did something new in world history when it united thirteen independent and autonomous States into a single federated Nation, and without destroying the independence of the States. What was formed was not a league, or confederacy, as had existed at different times among differing groups of the Greek City-States, and from time to time in the case of later Swiss and temporary European national groupings, but the union into a substantial and permanent Federal State of a number of separate States which still retained their independence, and with provision for the expansion of this national Union by the addition of new States. This federal principle in government is probably the greatest political contribution of the American Union to world

basis for the whole social system; it is that instead of destroying natural equality, *the fundamental pact*, on the contrary, substitutes a moral and lawful equality for *the physical inequality* which nature imposed upon men, so that, although unequal *in strength or intellect*, they all become equal by convention and legal right."

development. In the twentieth-century conception of a League of Nations it has borne still further fruit.

In the third place, the different American States changed their old Colonial Charters into definite written Constitutions, each of which contained a Preamble or Bill of Rights which affirmed the fundamental principles of democratic liberty (**R. 251**). These now became the fundamental law for each of the separate States, and the same idea was later worked out in the Constitution of the United States. These were the first written constitutions of history, and have since served as a type for the creation of constitutional government throughout the world. In such documents to-day free peoples everywhere define the rights and duties and obligations which they regard as necessary to their safety and happiness and welfare.

Finally, the Federal Constitution provided for the inestimable boon of religious liberty, and in a way that was both revolutionary and wholesome. At the beginning of the War for Independence the Anglican (Episcopal) faith had been declared "the established religion" in seven of the Colonies, and the Congregational was the established religion in three of the New England Colonies, while but three Colonies had declared for religious freedom and refused to give a preference to any special creed. This religious problem had to be met by the Constitutional Convention, and this body handled it in the only way it could have been intelligently handled in a nation composed of so many different religious sects as was ours. It simply incorporated into the Federal Constitution provisions which guaranteed the free exercise of their religious faith to all, and forbade the establishment by Congress of any state religion, or the requirement of any religious test as a prerequisite to holding any office under the control of the Federal Government. The American people thus took a stand for religious liberty at a time when the hatreds of the Reformation still burned fiercely, and when tolerance in religious matters was as yet but little known.

Importance of the religious-liberty contribution. The solution of the religious question arrived at was only second in importance for us to the establishment of the Federal Union, and the far-reaching significance to our future national life of the sane and for-the-time extraordinary provisions incorporated into our National Constitution can hardly be overestimated. This action led to the *early abandonment* of state religions, religious tests, and

public taxation for religion in the old States, and to the prohibition of these in the new. The importance of this solution of the religious question for the future of popular education in the United States was great, for it laid the foundations upon which our systems of free, common, public, tax-supported, non-sectarian schools have since been built up. How we could have erected a common public-school system on a religious basis, with the many religious sects among us, it is impossible to conceive. Instead, we should have had a series of feeble, jealous, antagonistic, and utterly inefficient church-school systems, chiefly confined to elementary education, and each largely intent on teaching its peculiar church doctrines and struggling for an increasing share of public funds.

How much the American people owe to the Fathers of the Republic for this most enlightened and intelligent provision, few who have not thought carefully on the matter can appreciate. To it we must trace not only the great blessing of religious liberty, which we have so long enjoyed, but also the final establishment of our common, free, public-school systems. The beginning of the new state motive for education, which was soon to supersede the religious motive, dates from the establishment with us of republican governments; and the beginning of the emancipation of education from church domination goes back to this wise provision inserted in our National Constitution.

This national attitude was later copied in the state constitutions, and as a preamble to practically all we find a Bill of Rights, which in almost every case included a provision for freedom of religious worship (**Rs. 251, 260**). After the middle of the nineteenth century a further provision prohibiting sectarian teaching or state aid to sectarian schools was everywhere added.

V. THE FRENCH REVOLUTION SWEEPS AWAY ANCIENT ABUSES

New demands for reform that could not be resisted. More than in any other continental European country France had, by 1783, become a united nation, conscious of a modern national feeling. Yet in France mediæval abuses in both State and Church had survived, as we have seen, to as great an extent almost as in any European nation. So determined were the clergy and nobility to retain their old powers, not only in France but throughout the continent of Europe as well, that progressive reform seemed well-nigh impossible. The work of the benevolent

despots had, after all, been superficial. By the last quarter of the eighteenth, though, a progressive change was under way which was certain to produce either evolution or revolution. The influence of the American experiment in nation-building now became pronounced. In 1779 Franklin took a copy of the new Pennsyl-

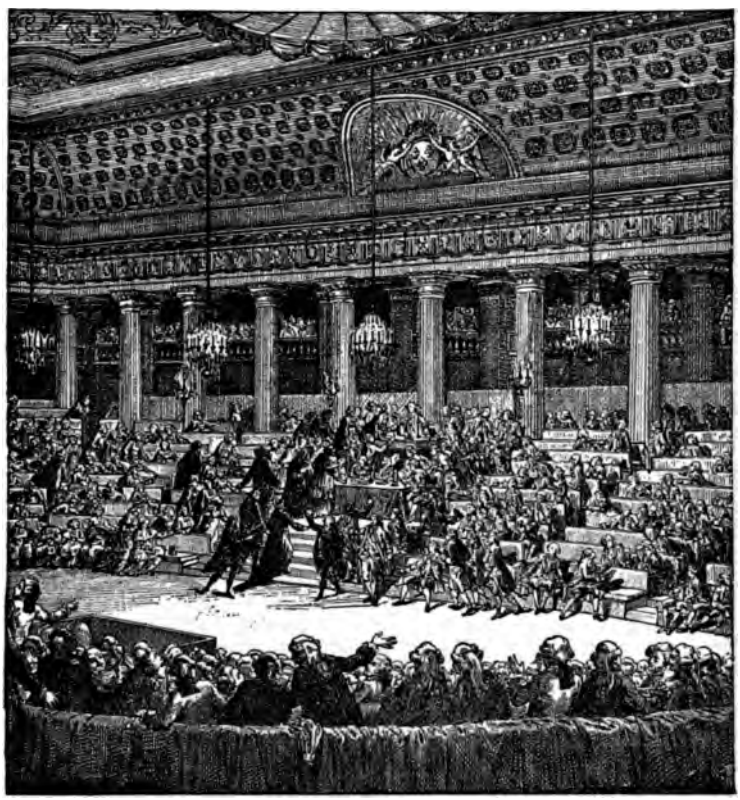


FIG. 153. THE STATES-GENERAL IN SESSION AT VERSAILLES
(After a contemporary drawing by Monnet)

vania Constitution with him to Paris, and in 1780 John Adams did the same with the Massachusetts Constitution. Frenchmen instantly recognized here, in concrete form, the ideas with which their own heads were filled. In 1783 Franklin published in France a French translation of all the American Constitutions, and the National Constitution of 1787 was as eagerly read and discussed *in Paris as in New York* or Philadelphia or Boston. America

appeared to the French of that stormy period as an ideal land, where the dreams of Rousseau about the social contract had been transformed into realities. Two years later the *cahiers* of the Third Estate demanded a written constitution for France. The French, too, had aided the American Colonies in their struggle for liberty, and French soldiers returning home carried back new political ideas drawn from the remarkable political progress of the new American Nation. By 1788 the demand for reform in France had become so insistent, and the condition of the treasury of the State was so bad, that it was finally felt necessary to summon a meeting of the States-General — a sort of national parliament consisting of representatives of the three great Estates: clergy, nobility, and commons — which had not met in France since 1614.

Besides electing its representatives, each locality and order was allowed to draw up a series of instructions, or *cahiers* (**R. 252**), for the guidance of its delegates. These *cahiers* are a mine of information as to the demands and hopes and interests of the French people,[1] and it is interesting to know that the *cahiers* of nobility, clergy, and commons alike included, among their demands, the organization of a comprehensive plan of education for France.[2]

France establishes constitutional government. The States-General met May 5, 1789, and soon (June 20) resolved itself into

[1] "I read attentively the *cahiers* drawn up by the three Orders before their union in 1789. I see that here the change of a law is demanded, and there of a custom — and I make note of them. I continue thus to the end of this immense task, and, when I come to put side by side all these particular demands, I see, with a sort of terror, that what is called for is the simultaneous and systematic abolition of all the laws and of all the customs existing in the country; whereupon I instantly perceive the approach of the vastest and most dangerous revolutions that have taken place in the world." (De Tocqueville, A. C., *State of Society in France before the Revolution of 1789*, p. 219.)

[2] For example, the clergy of Rodez and Saumur demanded "that there may be formed a plan of national education for the young"; the clergy of Lyons that education be restricted "to a teaching body whose members may not be removable except for negligence, misconduct, or incapacity; that it may no longer be conducted according to arbitrary principles, and that all public instructors be obliged to conform to a uniform plan adopted by the States-General"; the clergy of Blois that a system of colleges under church control be formed (**R. 252**); the nobility of Lyons that "a national character be impressed on the education of both sexes"; the nobility of Paris that "public education be perfected and extended to all classes of citizens"; the nobility of Blois that "better facilities for the education of children, and elementary textbooks adapted to their capacity, wherein the rights of man and the social duties shall be clearly set forth" shall be provided, and to this end that "there be established a council composed of the most enlightened scholars of the capital and of the provinces and of the citizens of the different orders, to formulate a plan of national education, for the benefit of all classes of society, and to edit elementary textbooks." The Third Estate of Blois demanded the establishment of free schools in all the rural parishes.

the National or Constituent Assembly. Terrified by the uprisings and burnings of châteaux throughout France, on the night of August fourth, in a few hours, it adopted a series of decrees which virtually abolished the *Ancien Régime* of privileges for France. The nobility gave up most of their old rights, the serfs [1] were freed, and the special privileges of towns were surrendered. Later the Assembly adopted a "Declaration of Rights of Man and of the Citizen" (R. 253), much like the American Declaration of Independence. This declared, among other things, that all men were born free and have equal rights, that taxes should be proportional to wealth, that all citizens were equal before the law and have a right to help make the laws, and that the people of the nation were sovereign. These principles struck at the very foundations of the old system.

Soon a Constitution for France, the first ever promulgated in modern Europe, was prepared and adopted (1791). This abolished the ancient privileges and reorganized France as a self-governing nation, much after the American plan. Local government was created, and the absolute monarchy was changed to a limited constitutional one. Next the property of the Church was taken over by the State, the monasteries were suppressed, and the priests and bishops were made state officials and paid a fixed state salary. The Jesuits had been expelled from France in 1764; and in 1792 the Brothers of the Christian Schools were not allowed longer to teach. Among other important matters, the Constitution of 1791 declared that:

> There shall be created and organized a system of public instruction common to all citizens, and gratuitous, with respect to those branches of instruction which are indispensable for all men.

Up to this point the Revolution in France had proceeded relatively peacefully, considering the nature of the long-standing abuses which were to be remedied. In August, 1792, the King was imprisoned, and in January, 1793, he was executed and a Republic proclaimed.[2] Then followed a reign of terror, which we do

[1] See footnote 1, page 165. One of the great results of the French Revolution was the abolition of serfdom in central and western Europe. The last European nation to emancipate its serfs was Russia, where they were freed in 1861.

[2] "Great was the difference between France at the end of 1791 and at the end of 1793. At the former date all looked hopeful for the future; the king was the father of his people; the Constitution of 1791 was to regenerate France, and set an example to Europe; all old institutions had been renovated; everything was new, and popular on account of its novelty. . . . By the end of 1793 all looked threatening for the future; *for the purpose of* repelling her foreign foes, who included nearly the whole of

not need to follow, and which ended only when Napoleon became master of France.

Beneficent results of the Revolution. The French Revolution was not an accident or a product of chance, but rather the inevitable result of an attempt to dam up the stream of human progress and prevent its orderly onward flow. The Protestant Revolts were the first great revolutionary wave, the Puritan revolution in England was another, the formation of the American Republic and the institution of constitutional government and religious freedom another, while the French Revolution brought the rising movement to a head and swept away, in a deluge of blood, the very foundations of the mediæval system. Along with much that was disastrous, the French Revolution accomplished after all much that was of greatest importance for human progress. The world at times seems to be in need of such a great catharsis. Progress was made in a decade that could hardly have been made in a century by peaceful evolution. The old order of privilege came to an end, mediævalism was swept away, and the serf was evolved into the free farmer and citizen. One fifth of the soil of France was restored to the use of the people from the monasteries, and an additional one third from the Church and nobility. The new principles of citizenship — Liberty, Equality, and Fraternity — were for France revolutionary in the extreme, while the assertion that the sovereignty of a nation rests with the people rather than with the king, here successfully promulgated, ended for all time the "divine-right-of-kings" idea for France. After political theory had for a time run mad, the organizing genius of Napoleon consolidated the gains, gave France a strong government, a uniform code of laws,[1] and began that organization of schools for the nation which ultimately meant the taking over of education from the Church and its provision at the expense of and in the interests of the nation.

Europe, France submitted to be ground down by the most despotic and arbitrary government ever known in modern history, — the Great Committee of Public Safety; the Reign of Terror was in full exercise, and it was doubtful whether the energy, audacity, and concentrated vigour of the Great Committee would enable France to be victorious over Europe, and thus secure for her the right of deciding on the character of their own government. She was to be successful, but at what a cost!" (Stephens, H. M., *The French Revolution*, vol. II, p. 512.)

[1] The *Code Napoléon*, prepared in 1804, was the first modern code of civil laws, though Frederick the Great had earlier prepared a partial code of Prussian laws. What the *Justinian Code* was to ancient Rome, this, organized into better form, was to modern France. This *Code*, prepared under Napoleon's direction, substituted one uniform code of laws worthy of a modern nation for the thousands of local laws which formerly prevailed in France.

The national idea extends to other lands. The reform work in France, together with the examples of English and American liberty, soon began to have their influence in other lands as well. People everywhere began to see that the old régime of privilege and misgovernment ought to be replaced. Other countries abolished serfdom, introduced better laws, and made reforms in the abuses of both Church and State. French armies and rulers carried the best of French ideas to other lands, and, where the French rule continued long enough, these ideas became fixed. In particular was the *Code Napoléon* copied in the Netherlands, the Italian States, and the States of southern and western Germany. The national spirit of Italy was awakened, and the Italian liberals began to look forward to the day when the small Italian States might be reunited into an Italian Nation, with Rome as its capital. This became the work of nineteenth-century Italian statesmen. For the first time in Spanish history, too, the people became conscious, under French occupation, of a feeling of national unity, and similarly the national spirit of German lands was stirred by the conquests of Napoleon.

A constitution was obtained in Spain, in 1812, and between 1815 and 1821 all of Spain's South American colonies — Argentina, Bolivia, Chile, Colombia, Ecuador, Panama, Paraguay, Uruguay, and Venezuela — revolted, became independent, and set up republics with constitutional governments, some of the larger ones based on the federal principle, as in the United States. Brazil similarly freed itself from Portugal and set up a constitutional and federated monarchy, in 1822. The Kingdom of Naples obtained constitutional government in 1820, and Sardinia in 1821. In 1823, when Spain with Austria's aid prepared to reconquer the Spanish South American Republics, President Monroe transmitted to the American Congress his message in which he declared that any attempt on the part of European nations to suppress republicanism on the American continent would be considered by the United States as an unfriendly act. This has since been known as the *Monroe Doctrine*. In 1829 Greece obtained her independence from Turkey, and in 1843 a constitutional form of government was obtained.

Important consequences of the democratic movement. Since the closing decades of the eighteenth century, when democratic government and written constitutions began, the sweep of democratic government has become almost world wide. Nations of

nation has changed to democratic and constitutional forms of government, the latest additions being Portugal (1911), China (1912), Russia (1917), and Germany (1918). New English colonies, too, have carried English self-government into almost every continent. The World War of 1914–18 gave a new emphasis to democracy, and there is good reason to believe that government of and by and for the people is ultimately destined to prevail among all the intelligent nations and races of the earth.

With the development of democratic government there has everywhere been a softening of old laws, the growth of humanitarianism, the wider and wider extension of the suffrage, important legislation as to labor, a previously unknown attention to the poor and the dependents of society, a vast extension of educational advantages, and the taking over of education from the Church by the State and the erection of the school into an important institution for the preservation and advancement of the national welfare. These consequences of the onward sweep of new-world ideas we shall trace more in detail in the chapters which follow.

QUESTIONS FOR DISCUSSION

1. Show the importance, for human progress, of each of the meanings of the new eighteenth-century liberalism, as enumerated on pages 471–72.
2. How do you explain the lack of any permanent influence on Spanish life of the work of the benevolent despots in Spain?
3. Show the liberalizing influence of the rise of scientific investigation and economic studies, for a nation still oppressed by mediævalism and bad government.
4. Enumerate the new sciences which arose in the eighteenth century.
5. Indicate the importance of the freedom of the press in the development of English political liberty.
6. Explain how the religious-freedom attitude of the American national constitution conferred an inestimable boon on the States in the matter of public education.

SELECTED READINGS

In the accompanying *Book of Readings* the following illustrative selections are reproduced:

247. Dabney: Ecclesiastical Tyranny in France.
248. Voltaire: On the Relation of Church and State.
249. Rousseau: Extract from the Social Contract.
250. Buckle: Changes in English Thinking in the Eighteenth Century.
251. Pennsylvania Constitution: Bill of Rights in.
252. Clergy of Blois: *Cahier* of 1779.
253. *France*: Declaration of the Rights of Man.

QUESTIONS ON THE READINGS

1. Explain why ecclesiastical tyranny should have awakened such a spirit of rebellion in France (**247**), and not in Spain or in Italian lands.
2. Just what attitude toward religion is shown in the extract from Voltaire (**248**)?
3. Bolshevists in Russia and in America talk to-day as did Rousseau in the Social Contract (**249**). Compare the justification of each with the eighteenth-century France of Rousseau.
4. What do all the changes enumerated by Buckle (**250**) indicate as to the spread of general education, irrespective of schools, among the English people?
5. Compare the Pennsylvania Bill of Rights of 1776 (**251**) with that of your own present-day state constitution.
6. Just what type of educational provisions, and what administrative organization, did the recommendations of the Clergy of Blois (**252**) contemplate? Indicate its shortcomings for eighteenth-century France.
7. Compare the main ideas of **251** and **253**.

SUPPLEMENTARY REFERENCES

*Dabney, R. H. *The Causes of the French Revolution.*
Taine, H. A. *The Ancient Régime.*

CHAPTER XX

THE BEGINNINGS OF NATIONAL EDUCATION

I. NEW CONCEPTIONS OF THE EDUCATIONAL PURPOSE

The State as servant of the Church. With the rise of the Protestant sects we noted, in the fifteenth and sixteenth centuries, and for the first time since Christianity became supreme in the western world, the beginnings of a state connection with the education of the young. The Protestant reformers, obtaining the support of the Protestant princes and kings, had successfully used this support to assist them in the organization of church schools as an aid to the reformed faith. Luther, it will be recalled (p. 312), had made a strong appeal to the mayors and magistrates of all German lands to establish schools as a part of their civic duties (R. 156), and had contended that a solemn obligation rested upon them to do so. The Dutch Provinces had worked closely with the Dutch Protestant synods (p. 334) in ordering schools established and in providing for their financing; Calvin had organized a religious City-State at Geneva (p. 330), of which religion and learning had been the corner-stones; the Scottish Parliament, by the laws of 1633 and 1646 (p. 335), had ordered schools for Scottish children in connection with the churches; and in the Scandinavian countries and in Finland the beginnings of a connection with the State had also been made (p. 315). Finally, in the new Massachusetts Colony the laws of 1642 and 1647 (p. 366) had, for the first time in the English-speaking world, ordered that children be taught "to read and understand the principles of religion and the capital laws of the country" (p. 364), and that schools be established by the towns, under penalty if they refused to do so. In all Protestant lands we saw that the reformers appealed, from time to time, to what were then the servants of the churches — the rising civil governments and principalities and States — to use their civil authority to force the people to meet their new religious obligations in the matter of schooling.

The purpose of the schooling ordered established, however, was almost wholly religious. Massachusetts, in ordering instruction in the "capital laws of the country," as well as reading and religion, had formed a marked exception. In nearly all lands the rising state governments merely helped the Protestant churches

to create the elementary vernacular religious school, and to make of it an auxiliary for the protection of orthodoxy and the advancement of the faith. Even in the new state school systems of the German States — Saxony, Würtemberg (p. 317), Brunswick, Weimar, Gotha — the elementary schools established were for religious rather than for state ends. This condition continued until well toward the middle of the eighteenth century.

The new state theory of education. After about the middle of the eighteenth century a new theory as to the purpose of education, and one destined to make rapid headway, began to be advanced. This theory had already made marked progress, as we shall see, in the New England Colonies, and had also found expression, as we shall also see in a later chapter, in the organizing work of Frederick the Great in Prussia. It was from the French political philosophers of the eighteenth century, though, that its clearest definition came. They now advanced the idea that schools were essentially civil affairs, the purpose of which should be to promote the everyday interests of society and the welfare of the State, rather than the welfare of the Church, and to prepare for a life here rather than a life hereafter.

After about 1750 a critical and reformatory pedagogy rapidly began to take shape in France, and the second half of the eighteenth century became a period of criticism and discontent and reconstruction in education, as well as in politics and religion.

This criticism and discontent in France was greatly stimulated by the decline in character and influence of the Jesuit schools. Unwilling to change their instruction to meet the needs of a changing society, their schools had become formal in character (**R. 146**), and were now engaged chiefly in stifling thinking rather than in promoting it. In consequence the schools had fallen into disrepute throughout all France. The Society, too, in the eighteenth century, came to be a powerful political organization which strove to dominate the State. So bad had the situation become by 1762, that the different parliaments in the provinces and in Paris had formulated complaints against the Jesuits and their schools,[1]

[1] The complaints were largely along such lines as that the instruction was confined to a few Latin authors; that instruction in the French language was neglected; that instruction in the history and geography of France should be introduced; that time was wasted "in copying and learning notebooks filled with vain distinctions and frivolous questions"; that training in the use of the French language should be substituted for the disputations in Latin; that in religion the study of the Bible was neglected for books of devotion and propaganda compiled by the members of the Order; that *moral casuistry* and religious bigotry were taught; and that the discipline was unnecessarily severe and wrong in character.

and, in 1764, the king was induced to suppress the Order.[1] This decline in influence and final suppression of the Society gave rise to some rather remarkable pedagogical literature, which looked to the creation of a system of state secondary schools in France to replace those of the Jesuits.

The outcome was the rise of a new national and individual conception of the educational purpose. This was destined in time to spread to other lands and to lead to the rise of complete state school systems, financed and managed by the State and conducted for state ends, and to the ultimate divorce of Church and State, in all progressive lands, in the matter of the education of the young. Teachers trained and certificated by the State were in time to supplant the nuns and brothers of the religious congregations in Catholic lands, as well as teachers who served as assistants to the pastors in Protestant lands and whose chief purpose was to uphold the teachings and advance the interests of the sect; citizens were to supplant the ecclesiastic in the supervision of instruction; and the courses of instruction were to be changed in direction and vastly broadened in scope to make them minister to the needs of the State rather than the Church, and to prepare pupils for useful life here rather than for life in another world.

II. THE NEW STATE THEORY IN FRANCE

The French political theorists. The leading French political theorists of the two decades between 1760 and 1780 now began to discuss education as in theory a civil affair, intimately connected with the promotion of the welfare of the State. The more important of these, and their chief ideas were:



FIG. 154. ROUSSEAU (1712–78)

1. *Rousseau.* The first of the critical and reformatory pedagogical writers to awaken any large interest and obtain a general hearing was Jean-Jacques Rousseau. The same year (1762) that his *Social Contract* appeared and attacked the foundations of the old political system (p. 483), his *Émile* also appeared and attacked with equal vigor the religious and

[1] In 1759 the Jesuits were expelled from Portugal, in 1767 from Spain, and in 1773 the Pope at Rome, "recognizing that the members of this Society have not a little troubled the Christian commonwealth, and that for the welfare of Christendom it were better that the Order should disappear," abolished the Society entirely. Forty years later it was reconstituted in a modernized form.

social theory as to education then prevailing throughout western Europe. For the stiff and unnatural methods in education, under which children were dressed and made to behave as adults,[1] the harsh discipline of the time, and the excessive emphasis on religious instruction and book education, he preached the substitution of life amid nature, childish ways and sports, parental love, and an education that considered the instincts and natural development of children.

Gathering up the political and social ideas of his age as to ecclesiastical and political despotism; the nature of the social contract; that the "state of nature" was the ideal one, and the one in which men had been intended to live; that human duty called for a return to the "state of nature," whatever that might be; and that the artificiality and hypocrisy of his age in manners, dress, religion, and education were all wrong — Rousseau restated his political philosophy in terms of the education of the boy, Émile. Despite its many exaggerations, much faulty reasoning, and many imperfections, the book had a tremendous influence upon Europe in laying bare the limitations and defects and abuses of the formal and ecclesiastical education of the time.[2] He may be regarded as the first important writer to sap the foundations of the old system of religious education, and to lay a basis for a new type of child training (**R. 254**). Though Rousseau's enthusiasm took the form of theory run mad, and the educational plan he proposed was largely impossible, he nevertheless popularized education, not only in France, but among the reading public of the progressive European States as well. After he had written, the old limited and narrow religious education was on the defensive, and, though time was required, the transition to a more secular type of education was inevitable as fast as nations and peoples could shake off the dominance of the Church in state affairs.

2. *La Chalotais.* The year following the publication of Rousseau's *Émile* appeared La Chalotais's *Essai d'éducation nationale* (1763). René de la Chalotais, a Solicitor-General for the Parliament of Bretagne, was one of the notable French parliamentari-

[1] Little boys wore their hair long and powdered, carried a sword, and had coats with gilded cuffs, while little girls were dressed in imitation of the lady of fashion. Proper deportment was an important part of a child's training.

[2] The iconoclastic nature of Rousseau's volume may be inferred from its opening sentence, in which he says: "Everything is good as it comes from the hand of the author of nature; everything degenerated in the hand of man." In another place he breaks out: "Man is born, lives, and dies in a state of slavery. At his birth he is stitched *into swaddling clothes*, at his death he is nailed in his coffin; and as long as *he preserves the human form* he is held captive by our institutions."

ans of the middle of the eighteenth century. Unlike Rousseau's highly imaginary, exaggerated, sentimental, and paradoxical volume, La Chalotais produced a practical and philosophical discussion of the problem of the education of a people. Declaring firmly that education was essentially a civil affair; that it was the function of government to make citizens contented by educating them for their sphere in society; that citizen and secular teachers should not be excluded for celibates;[1] that the real purpose of education should be to prepare citizens for France; that the poor were deserving of education; and that "the most enlightened people will always have the advantage" in the struggles of a modern world, La Chalotais produced a work which was warmly approved by such political philosophers as Voltaire, Diderot, and Turgot, and which was translated into several European languages (**R. 255**). Though far less widely read than Rousseau's *Émile*, it was far more influential in shaping subsequent political theory and action regarding the relations of education to the State. Nearly every proposal for educational legislation during the days of the Revolution went back in idea to this philosophic discussion of the question by La Chalotais and to the practical proposals of Rolland and Turgot.



FIG. 155
LA CHALOTAIS
(1701–83)

3. *Rolland.* In 1768 Rolland, president of the Parliament of Paris, presented to his colleagues a report in which he outlined a national system of education to replace both the schools of the Jesuits and those of the Brothers of the Christian Schools. La Chalotais had proposed a more modern system of state schools chiefly to replace those of the Jesuits, but Rolland went further



FIG. 156. ROLLAND
(1734–93)

[1] "I do not presume to exclude ecclesiastics, but I protest against the exclusion of laymen. I dare claim for the nation an education which depends only on the *State, because it* belongs essentially to the State; because every State has an inalienable and indefeasible right to instruct its members; because, finally, the children of the State ought to be educated by the members of the State." (La Chalotais.)

and proposed the extension of education to all, and the supervision of all schools by a central council of the Government. By means of a centralized control, a central university to which the other universities of France were to be subordinate, a higher normal school to train teachers for the colleges (secondary schools), and universal education,[1] Rolland hoped to develop for France a national spirit, a national character, and a national government and code of laws, and to bring the youth of the provinces into harmony with the best of all French ideas.

4. *Turgot.* In 1774 Turgot was appointed Minister of Finance (p. 481), and in 1775 he made a series of recommendations to the King in which he set forth ideas analogous to those of Rolland, and presented an eloquent plea for the formation of a national council of public instruction and the establishment of a system of civil and national education for the whole of France. In closing he wrote:

> Your kingdom, Sir, is of this world. Without opposing any obstacle to the instructions whose object is higher, and which already have their rules and their expounders, I think I can propose to you nothing of more advantage to your people than to cause to be given to all your subjects an instruction which shows them the obligations they owe to society and to your power to protect them, and the interest they have in fulfilling those duties for the public good and their own. This moral and social instruction requires books expressly prepared, by competition, and with great care, and a schoolmaster in each parish to teach them to children, along with the art of writing, reading, counting, measuring, and the principles of mechanics. The study of the duty of citizenship ought to be the foundation of all the other studies. . . . There are methods and establishments for training geometricians, physicists, and painters, but there are none for training citizens.

5. *Diderot.* In 1776 Diderot, editor with D'Alembert of the *Encyclopædia* (1751–72), prepared, at the request of Catherine II (p. 477), under the title of *Plan of a University*, a complete scheme for the organization of a state system of public instruction for Russia. Though the plan was never carried out, it was printed and much discussed in France, and is important as coming from one of the most influential Frenchmen of his time. He commends as an example to be followed the work of the German States in the organization of popular instruction. For Russia he outlines first

[1] "Education cannot be too widely diffused, to the end that there may be no class of citizens who may not be brought to participate in its benefits. It is expedient that each citizen receive the education which is adapted to his needs." (Rolland.)

a system of people's schools, which shall be free and obligatory for all, and in which instruction in reading, writing, arithmetic, morals, civics, and religion shall be taught. "From the Prime Minister to the lowest peasant," he says, "it is good for every one to know how to read, write, and count." For the series of secondary schools to be established, he condemns the usual practice of devoting so much of the instruction to the humanities and a mediæval type of logic and ethics, and urges instead the introduction of instruction in mathematics, in the modern sciences, literature, and the work of governments. Classical studies he would confine to the last years of the course. Science, history, drawing, and music find a place in his scheme.

All this instruction Diderot would place under the supervisory control of an administrative bureau to be known as the *University of Russia*, at the head of which should be a statesman, who should exercise control of all the work of public instruction beneath. Though never carried out in Russia, the University of France of 1808 is largely an embodiment of the ideas he proposed in 1776.

Legislative proposals to embody these ideas. During the quarter of a century between the publication of Rousseau's *Émile* and the summoning of the States-General to reform France (1762–88), the educational as well as the political ideas of the French reformers had taken deep root with the thinking classes of the nation. The *cahiers* of 1789, of all Orders (p. 500), gave evidence of this in their somewhat general demand for the creation of some form of an educational system for France (**R. 252**). From the first days of the Revolution pedagogical literature became plentiful, and the successive National Assemblies found time, amid the internal reorganization of France, constitution-making, the troubles with and trial of the King, and the darkening cloud of foreign intervention, to listen to reports and addresses on education and to enact a bill for the organization of a national school system. The more important of these educational efforts were:

1. *The Constituent Assembly* (June 17, 1789, to September 30, 1791). In the Constituent Assembly, into which the States-General resolved itself, June 17, 1789, and which continued until after it had framed the constitution of 1791, two notable addresses and one notable report on the organization of education were made. The Count de Mirabeau, a nobleman turned against his class and elected to the States-General as a representative of the Third Estate, made addresses on the "Organization of a Teaching

Body," and on the "Organization of a National *Lycée*." In the first he advocated the establishment of primary schools throughout France. In the second he proposed the establishment of colleges of literature in each department, with a National *Lycée* at Paris for higher (university) education, and to contain the essentials of a national normal school or teachers' college as well.



FIG. 157
COUNT DE MIRABEAU
(1749–91)

Mirabeau's proposals represent rather a transition in thinking from the old to the new, but the Report of Talleyrand (1791), former Bishop of Autun, now turned revolutionist, embodies the full culmination of revolutionary educational thought. Public instruction he termed "a power which embraces everything, from the games of infancy to the most imposing fêtes of the Nation." He definitely proposed the organization of a complete state system of public instruction for France, to consist of a primary school in every canton (community, district), open to the children of peasants and workmen — classes heretofore unprovided with education; a secondary school in every department (county); a series of special schools in the chief French cities, to prepare for the professions; and a National Institute, or University, to be located at Paris. Inspired by Montesquieu's principle that "the laws of education ought to be relative to the principles of government," Talleyrand proposed a bill designed to give effect to the provisions of the Constitution of 1791 relating to education (p. 501), and to provide an education for the people of France who were now to exercise, through elected representatives, the legislative power for France. Instruction he held to be the necessary counterpoise of liberty, and every citizen was to be taught to know, obey, love, and protect the new constitution. Political, social, and personal morality were to take the place of religion in the cantonal schools, which were to be free and equally open to



FIG. 158. TALLEYRAND
(1758–1838)

all. As the Constituent Assembly was succeeded by the newly elected Legislative Assembly within three weeks after Talleyrand submitted his Report, no action was taken on his bill.

2. *The Legislative Assembly* (October 1, 1791, to September 21, 1792). This new legislative body was far more radical in character than its predecessor, and far more radical than was the sentiment of France at the time. Among other acts it abolished (1792) the old universities and confiscated (1793) their property to the State. To it was submitted (April 20–21, 1792) by the mathematician, philosopher, and revolutionist, Marquis de Condorcet,[1] on behalf of the Committee on Public Instruction and as a measure of reconstruction, a Report and draft of a Law for the organization of a complete democratic system of public instruction for France (**R. 256**). It provided for the organizing of a primary school for every four hundred inhabitants, in which each individual was "to be taught to direct his own conduct and to enjoy the plenitude of his own rights," and where principles would be taught, calculated to "insure the perpetuation of liberty and equality." The bill also provided, for the first time, for the organization of higher primary schools in the principal towns; colleges (secondary schools) in the chief cities (one for every four thousand inhabitants); a higher school for each "department"; *Lycées*, or institutions of still higher learning, at nine places in France; and a National Society of Sciences and Arts to crown the educational system at Paris. The national system of education he proposed was to be equally open to women, as well as men, and to be gratuitous throughout. Teachers for each grade of school were to be prepared in the school next above. Sunday lectures for workingmen and peasants were to be given by teachers everywhere. Public morality, political intelligence, human progress, and the preservation of liberty and equality were the aims of the instruction. The necessity for education in a constitutional government he saw clearly. "A free constitution," he writes,



FIG. 159. CONDORCET (1743–94)

[1] Condorcet had not been a member of the Constituent Assembly, but for some years had been deeply interested in the idea of public education, and had published five articles on the subject. His Report was a sort of embodiment, in legal form, of his previous thinking on the question.

"which should not be correspondent to the universal instruction of citizens, would come to destruction after a few conflicts, and would degenerate into one of those forms of government which cannot preserve the peace among an ignorant and corrupt people." Anarchy or despotism he held to be the future for peoples who become free without being enlightened. He held it to be a fundamental principle that:

> The order of nature includes no distinctions in society beyond those of education and wealth. To establish among citizens an equality in fact, and to realize the equality confirmed by law, ought to be the primary object of national instruction.

The bill proposed by Condorcet, while too ambitious for the France of his day, was thoroughly sound as a democratic theory of education. and an accurate prediction of what the nineteenth century brought generally into existence. Condorcet's Report was discussed, but not acted upon.



FIG. 160. THE INSTITUTE OF FRANCE
Founded by Article 298 of the Constitution of Year III (1793)

3. *The National Convention* (September 21, 1792, to October 26, 1795). The Convention was also a radical body, deeply interested in the creation of a system of state schools for the people of France. To higher education there was for a time marked opposition, though later in its history the Convention erected a number of important higher technical institutions and schools, among the most important of which was the Institute of France. There was also in the Convention marked opposition to all forms of clerical control of schools. The schools of the Brothers of the Christian Schools were suppressed by it, in 1792, and all secular and endowed schools and colleges were abolished and their property *confiscated, in 1793*. The complete supremacy of the State in

all educational matters was now asserted. Great enthusiasm was manifested for the organization of state primary schools, which were ordered established in 1793 (**R. 258 a**), and in these:

Children of all classes were to receive that first education, physical, moral, and intellectual, the best adapted to develop in them republican manners, patriotism, and the love of labor, and to render them worthy of liberty and equality.

The course of instruction was to include: "to speak, read, and write correctly the French language; the geography of France; the rights and duties of men and citizens;[1] the first notions of natural and familiar objects; the use of numbers, the compass, the level, the system of weights and measures, the mechanical powers, and the measurement of time. They are to be taken into the fields and the workshops where they may see agricultural and mechanical operations going on, and take part in the same so far as their age will allow."

What a change from the course of instruction in the religious schools just preceding this period!

A multiplicity of reports, bills, and decrees, often more or less contradictory but still embodying ideas advanced by Condorcet and Talleyrand, now appeared. Whereas the preceding legislative bodies had considered the subject carefully, but without taking action, the Convention now acted. The nation, though, was so engrossed by the internal chaos and foreign aggression that there was neither time nor funds to carry the decrees into effect.



FIG. 161. LAKANAL (1762–1845)

The most extreme proposal of the period was the bill of Lepelletier le Saint-Fargeau to create a national system of education modeled closely after that of ancient Sparta. The best of the proposals probably was the Lakanal Law, of November 17, 1794, which ordered a school for every one thousand inhabitants, with special divisions for boys and girls, and which provided for instruction in:

1. Reading and writing the French language.
2. The Declaration of the Rights of Man, and the Constitution.
3. Lessons on republican morals.

[1] All the educational aims of the past were now relegated to a second place, and *man became* a political animal, "brought into the world to know, to love, and to *obey the Constitution*." The *Declaration of the Rights of Man* became the new *Catechism* of childhood.

4. The rules of simple calculation and surveying.
5. Lessons in geography and the phenomena of nature.
6. Lessons on heroic actions, and songs of triumph.

Lakanal also carefully prescribed the method of instruction, and advocated the founding of a national normal school (Latin *norma;* a rule), which idea the Convention adopted in 1794, the school opening [1] in January, 1795. Supplementing this was the law of February 25, 1795, ordering central or higher schools established to replace the former colleges,[2] one for every three hundred thousand of the population, which were to offer instruction from twelve to eighteen. The course was to include:

12 to 14 — Drawing, natural history, ancient and living languages.
14 to 16 — Mathematics, natural philosophy, experimental chemistry.
16 to 18 — Grammar, literature, history, legislation.

Organized on a soviet principle, each professor declared the equal of every other, and lacking any effective administration or discipline, these institutions soon fell into disrepute and were displaced when Napoleon reorganized secondary education in France.

The law of October 25, 1795, closed the work of the Convention. This made less important provisions for primary education (**R. 258 b**) than had preceding bills, but was the only permanent contribution of this period to the organization of primary schools. It placed greater emphasis than had the legislative Assembly on the creation of secondary and higher institutions (**R. 258 a**), of more value to the bourgeois class. This bill of 1795 represents a reaction from the extreme republican ideas of a few years earlier, and the triumph of the conservative middle-class elements in the nation over the radical republican elements previously in control.

The Convention also, in the latter part of its history, created a number of higher technical institutions of importance, which

[1] This was created on a grand and visionary scale. Its purpose was to supply professors for the higher institutions. It opened with a large attendance, and lectures on mathematics, science, politics, and languages were given by the most eminent scholars of the time. A normal school, though, it hardly was, and in 1795 it closed — a virtual failure. In 1808 Napoleon re-created it, on a less pretentious and a more useful scale, and since then it has continued and rendered useful service as a training-school for teachers for the higher secondary schools of France.

[2] A total of 105 of these Central Schools were to be established, five in Paris, and one in each of the one hundred chief towns in the departments. By 1796 there were 40, by 1797 there were 52, by 1798 there were 59, by 1799 there were 86, and by 1800 there were 91 such schools in existence. This, times considered, was a *remarkable development.*

were expressive alike of the French interest in scientific subjects which arose during the latter part of the eighteenth century, and of the new French military needs. Many of these institutions have persisted to the present, so well have they answered the scientific interests and needs of the nation. A mere list of the institutions created is all that need be given. These were:

Museum or Conservatory of Arts (Jan. 16, 1794).
Conservatory of Arts and Trades (Oct. 10, 1794).
New medical schools (*Schools of Health*) ordered (Dec. 4, 1794).
Museum of Natural History (Dec. 11, 1794).
Central Schools to succeed the former Colleges (secondary schools) (Feb. 25, 1795).
School of Living Oriental Languages (March 30, 1795).
Veterinary Schools (April 21, 1795).
Course in Archæology, National Library (June 8, 1795).
Bureau of Longitude (June 29, 1795).
Conservatory of Music (Aug. 3, 1795).
The National Library (Oct. 17, 1795).
Museum of Archæological Monuments (Oct. 20, 1795).
Polytechnic Schools (**R. 257**); School of Civil Engineering; School of Hydrographic Engineers; and School of Mining (Oct. 22, 1795).

The Convention also adopted the metric system of weights and measures; enacted laws under which the peasants could acquire title to the lands they had tilled for so long; and began the unification of the laws of the different parts of the country into a single set, which later culminated in the *Code Napoléon*.

4. *The Directory* (1795–99) *and the Consulate* (1799–1804). The Revolution had by this time largely spent itself, the Directory followed, and in 1799 Napoleon became First Consul and for the next sixteen years was master of France. The Law of 1795 for primary schools (**R. 258 b**) was but feebly administered under the Directory, as foreign wars absorbed the energies and resources of the Government. Napoleon's chief educational interest, too, was in opening up opportunities for talent to rise, in encouraging scientific work and higher specialized institutions, and in developing schools of a type that would support the kind of government he had imposed upon France. The secondary and higher schools he established and promoted cost him money at a time when money was badly needed for national defense, and primary education was accordingly neglected during the time he directed the destinies of the nation. His educational organizations and work we shall refer to again in a later chapter.

The Revolutionary enthusiasts had stated clearly their theory

of republican education, but had failed to establish a permanent state school system according to their plans. This now became the work of the nineteenth century. In the meantime, in the new United States of America the same ideas were taking shape and finding expression, and to the developments there we next turn.

III. THE NEW STATE THEORY IN AMERICA

Waning of the old religious interest. As early as 1647 Rhode Island Colony had enacted the first law providing for freedom of religious worship ever enacted by an English-speaking people, and two years later Maryland enacted a similar law. Though the Maryland law was later repealed, and a rigid Church-of-England rule established there, these laws were indicative of the new spirit arising in the New World. By the beginning of the eighteenth century a change in attitude toward the old problem of personal salvation had become evident. Frontier conditions; the gradual rise of a civil as opposed to a religious form of town government; the rising interests in trade and shipping; the beginnings of the breakdown of the old aristocratic traditions and customs transplanted from Europe; the rising individualism in both Europe and America — these all helped to weaken the hold on the people of the old religious doctrines.

By 1750 the change in religious thinking in the American Colonies had become quite marked.[1] Especially was this change evidenced in the dying-out of the old religious fervor and intolerance, and the breaking-up of the old religious solidarity. While most of the Colonies continued to maintain an "established Church," other sects had to be admitted to the Colony and given freedom of worship. The Puritan monopoly in New England was broken, as was also that of the Anglican faith in the central Colonies. The day of the monopoly of any sect in a Colony was over. New secular interests began to take the place of religion as the chief topic of thought and conversation, and secular books began to dispute the earlier predominance of the Bible. A few colonial newspapers had begun (seven by 1750), and these became expressive of the new colony interests.

Changing character of the schools. These changes in attitude toward the old religious problems materially affected both the

[1] "The commercial depression of 1740 fell upon a generation of New Englanders whose minds no longer dwelt preëminently upon religious matters, but who were, on the contrary, preëminently commercial in their interests." (Green, M. L., *Development of Religious Liberty in Connecticut*, p. 226.)

support and the character of the education provided in the Colonies. The Law of 1647, requiring the maintenance of the Latin grammar schools, had been found to be increasingly difficult of enforcement, not only in Massachusetts, but in all the other New England Colonies which had followed the Massachusetts example. With the changing attitude of the people, which had become clearly manifest by 1750, the demand for relief from the maintenance of this school in favor of a more practical and less aristocratic type of higher school, if higher school were needed at all, became marked. By the close of the colonial period the new American Academy (p. 463), with its more practical studies, had begun to supersede the old Latin grammar school.

The elementary school experienced something of the same difficulties. Many of the parochial schools died out, while others declined in character and importance. In Church-of-England Colonies all elementary education was left to private initiative and philanthropic and religious effort (p. 373). In the southern Colonies the classes in society and the character of the plantation life made common schools impossible, and the feeling of any need for elementary schools almost entirely died out. In New England the eighteenth century was a continual struggle on the one hand to prevent the original religious town school from disappearing, and on the other to establish in its place a series of scattered and inferior district schools, while either church or town support and tuition fees became ever harder to obtain. Among other changes of importance the reading school and the writing school now became definitely united, in all the smaller places and in the rural districts, as a measure of economy, to form the American school of the "3 Rs." New textbooks, too, containing less of the gloomily religious than the *New England Primer*, and secular rather than religious in character (p. 443), appeared after 1750 and began to be used in the schools. After 1750, too, it was increasingly evident that the old religious enthusiasm for schools had largely died out; that European traditions and ways and types of schools no longer completely satisfied; and that the period of the transplanting of European educational ideas and schools and types of instruction was coming to an end. Instead, the evolution of a public or state school out of the original religious school, and the beginnings of the evolution of distinctly American types of schools, better adapted to American needs, became increasingly evident in the Colonies as the eighteenth century progressed.

Rise of the civil or state school. As has been stated earlier, the school everywhere in America arose as a child of the Church. In the Middle Colonies, where the parochial-school conception of education was the prevailing type, the school remained under church control until after the foundation of our national government. In New England, though — and the New England evolution in time became the prevailing American practice — the school passed through a very interesting development during colonial times.

As we have seen (p. 360), each little New England town was originally established as a little religious republic, with the Church in complete control. The governing authorities for church and civil affairs were much the same. When acting as church officers they were known as Elders and Deacons; when acting as civil or town officers they were known as Selectmen. The State, as represented in the colony legislature or the town meeting, was clearly the servant of the Church, and existed in large part for religious ends. It was the State acting as the servant of the Church which enacted the Massachusetts laws of 1642 and 1647 (**Rs. 190, 191**), requiring the towns to maintain schools for religious ends. Now, so close was the connection between the religious town, which controlled church affairs, and the civil town, which looked after roads, fences, taxes, and defense — the constituency of both being one and the same, and the meetings of both being held at first in the meeting-house — that when the schools were established the colony legislature placed them under the civil — as involving taxes, and being a public service — rather than under the religious town. The interests of one were the interests of both, and, being the same in constituency and territorial boundaries, there seemed no occasion for friction or fear. From this religious beginning the civil school and the civil school-town and school-township, with all their elaborate school administrative machinery, were later evolved.

The erection of a town hall, separate from the meeting-house, was a first step in the process. School affairs now were discussed at the town hall, instead of in the church. The town authorities now appointed committees to locate and build schoolhouses, select and certificate the teachers, and visit and examine the school. Next a regular town school committee was provided for. To this was given the management of the town school, and town taxes, instead of church taxes, were voted for buildings and maintenance. The *minister continued to* certificate the grammar-school master

until the close of the colonial period, but the power to certificate the elementary school teachers passed to the town authorities early in the eighteenth century. By the close of the century all that the minister as the only surviving representative of church control had left to him was the right to accompany the town authorities in the visitation of schools. Thus gradually but certainly did the earlier religious school in America pass out from under the control of the Church and come under the control of the State. When our national government and the different state governments were established, the States were ready to accept, in principle at least, the theory gradually worked out in New England that schools are state institutions, and should be under the control of the State.

The early state constitutions and laws. In framing the Federal [illegible] education then being regarded largely as a [illegible] was left to the States to handle as they saw fit; so we [illegible] State constitutions and laws to see how far the [illegible] States had, by the close of the eighteenth century, [illegible] education as an affair of the State.

[illegible]

Chap. V, Sec. 2. Wisdom and knowledge, as well as virtue, diffused generally among the body of the people, being necessary for the preservation of their rights and liberties; and as these depend on spreading the opportunities and advantages of education in the various parts of the country, and among the different orders of the people, it shall be the duty of the legislatures and magistrates, in all future periods of this Commonwealth, to cherish the interests of literature and the sciences, and all seminaries of them; especially the university at Cambridge, public schools, and grammar schools in the towns; to encourage private societies and public institutions, by rewards and immunities, for the promotion of agriculture, arts, sciences, commerce, trades, manufactures, and a natural history of the country; to countenance and inculcate the principles of humanity and general benevolence, public and private charity, industry and frugality, honesty and punctuality in their dealings; sincerity, good humor, and all social affections and generous sentiments among the people.

Though the Federal Constitution made no provision for education or aid to schools, when the Congress of the Confederation, in 1787, adopted the Ordinance for the organization and government of the Northwest Territory, out of which the States of Ohio, Indiana, Illinois, Michigan, and Wisconsin were later carved, it prefixed to this Ordinance the following significant provision:

Art. 3. Religion, morality, and knowledge being necessary to good government and the happiness of mankind, schools and the means of education shall forever be encouraged [in the States to be formed from this Territory].

By the time the first State formed from this western territory was ready to be admitted to the Union (Ohio, 1802), the theory that education is a function of the State had come to be so thoroughly accepted, in principle at least, by the new American people that Congress now began a policy, ever since continued, of aiding each new State to establish and maintain a state system of schools. To this end Congress gave the new State for this purpose a generous endowment of national land, and in addition three townships of land to endow a state university. We also find that the constitutions of the first States created from this new Northwest Territory (Ohio, 1802; Indiana, 1816[1]) contain for the time good provisions relating to public education. The Ohio provisions (**R. 260**) are noteworthy for the strong stand for religious freedom and against

[1] Prominent in the Indiana constitutional convention of 1816 were a number of Frenchmen of bearing and ability, then residing in the old territorial capital — Vincennes. How much they influenced the statement of the article on education is not known, but it reads as though French revolutionary ideas had been influential in shaping it.

any discrimination in the schools between rich and poor, while the Indiana provisions (**R. 261**) are marked for their broad and generous conception of the scope and purpose of a state system of public instruction.

Many of the older States enacted general state school laws early in their history (**R. 262**). Connecticut continued the general school laws of 1700, 1712, and 1714 unchanged, and in 1795 added $1,200,000, derived from land sales, to a permanent state school endowment fund, created as early as 1750. Vermont enacted a general school law in 1782. Massachusetts and New Hampshire enacted new general school laws, in 1789, which restated and legalized the school development of the preceding hundred and fifty years. All these required the maintenance of schools by the towns for a definite term each year, ordered taxation, and fixed the school studies required by the State. New York, in 1784, created an administrative organization, known as the University of the State of New York, to supervise secondary and higher education throughout the State — an institution clearly modeled after the centralizing ideas of Condorcet, Rolland, and Diderot (p. 477), and very similar to the ideas proposed by Talleyrand and Condorcet and later (1808) embodied in the University of France by Napoleon. In 1795 New York also provided for a state system of elementary education. Georgia created a state system of academies, as early as 1783. Delaware created a state school fund, in 1796, and Virginia enacted an optional school law the same year. North Carolina created a state university, as early as 1795.

The new political motive for schools. We thus see, in the new United States, the theories of the French revolutionary thinkers and statesmen actually being realized in practice. The constitutional provisions, and even the legislation, often were in advance of what the States, impoverished as they were by the War of Independence, could at once carry out, but they mark the evolution in America of a clearly defined state theory as to education, and the recognition of a need for general education in a government whose actions were so largely influenced by the force of public opinion. The Federal Constitution had extended the right to vote for national officers to all, and the older States soon began to remove their earlier property qualifications for voting and to extend general manhood suffrage to all citizens.

This new development in government by the people, which

meant the passing of the rule of a propertied and educated class and the establishment of a real democracy, caused the leading American statesmen to turn early to general education as a necessity for republican safety. In his Farewell Address to the American people, written in 1796, Washington said:

> Promote, then, as an object of primary importance, institutions for the general diffusion of knowledge. In proportion as the structure of a government gives force to public opinion, it is essential that public opinion should be enlightened.

Jefferson spent the years 1784 to 1789 in Paris, and became a great propagandist in America for French political ideas. Writing to James Madison from France, as early as 1787, he said:

> Above all things, I hope the education of the common people will be attended to; convinced that on this good sense we may rely with the most security for the preservation of a due sense of liberty.

In 1779, then, as a member of the Virginia legislature, Jefferson tried unsuccessfully to secure the passage of a comprehensive bill, after the plan of the French Revolutionary proposals, for the organization of a complete system of public education for Virginia. The essential features of the proposed bill (**R. 263**) were that every county should be laid off into school districts, five to six miles square, to be known as "hundreds," and in each of these an elementary school was to be established to which any citizen could send his children free of charge for three years, and as much longer as he was willing to pay tuition; that the leading pupil in each school was to be selected annually and sent to one of twenty grammar (secondary) schools to be established and maintained at various points in the State; after two years the leaders in each of these schools were to be selected and further educated free for six years, the less promising being sent home; and at the completion of the grammar-school course, the upper half of the pupils were to be given three years more of free education at the State College of William and



FIG. 162. THOMAS JEFFERSON (1743–1826)

Mary, and the other half were to be employed as teachers for the schools of the State.[1]

Though the scheme failed of approval, Jefferson never lost interest in the education of the people for intelligent participation in the functions of government. Writing from Monticello to Colonel Yancey, in 1816, after his retirement from the presidency, he wrote:

> If a nation expects to be ignorant and free in a state of civilization it expects what never was and never will be. . . . There is no safe deposit (for the functions of government) but with the people themselves; nor can they be safe with them without information.

In 1819 the founding of the University of Virginia crowned Jefferson's efforts for education by the State. This institution, the Declaration of Independence, and the statute for religious freedom in Virginia stand to-day as the three enduring monuments to his memory.[2]

Other of the early American statesmen expressed similar views as to the importance of general education by the State. John Jay, first Chief Justice of the United States, in a letter to his friend, Dr. Benjamin Rush, wrote:

> I consider knowledge to be the soul of a Republic, and as the weak and the wicked are generally in alliance, as much care should be taken to diminish the number of the former as of the latter. Education is the way to do this, and nothing should be left undone to afford all ranks of people the means of obtaining a proper degree of it at a cheap and easy rate.

James Madison, fourth President of the United States, wrote:

> A satisfactory plan for primary education is certainly a vital desideratum in our republics.
>
> A popular government without popular information or the means of acquiring it is but a prologue to a farce or a tragedy, or, perhaps, both. Knowledge will forever govern ignorance; and a people who mean to be their own governors must arm themselves with the power which knowledge gives.

John Adams, with true New England thoroughness, expressed the new motive for education still more forcibly when he wrote:

[1] For the original Bill of 1779 in full, in the original spelling, see the *Biennial Report of the Superintendent of Public Instruction for Virginia*, 1900–01, pp. lxx–lxxv.

[2] Though Jefferson had been Governor of Virginia during the Revolutionary War; had repeatedly served in the Virginia legislature and in Congress; and had twice been President of the United States, he counted all these as of less importance than the three services mentioned, and in preparing the inscription to be placed on his tomb he included only these three.

The instruction of the people in every kind of knowledge that can be of use to them in the practice of their moral duties as men, citizens, and Christians, and of their political and civil duties as members of society and freemen, ought to be the care of the public, and of all who have any share in the conduct of its affairs, in a manner that never yet has been practiced in any age or nation. The education here intended is not merely that of the children of the rich and noble, but of every rank and class of people, down to the lowest and poorest. It is not too much to say that schools for the education of all should be placed at convenient distances and maintained at the public expense. The revenues of the State would be applied infinitely better, more charitably, wisely, usefully, and therefore politically in this way than even in maintaining the poor. This would be the best way of preventing the existence of the poor. . . .

Laws for the liberal education of youth, especially of the lower classes of people, are so extremely wise and useful that, to a humane and generous mind, no expense for this purpose would be thought extravagant.

Having founded, as Lincoln so well said later at Gettysburg, "on this continent a new nation, conceived in liberty, and dedicated to the proposition that all men are created equal," and having built a constitutional form of government based on that equality, it in time became evident to those who thought at all on the question that that liberty and political equality could not be preserved without the general education of all. A new motive for education was thus created and gradually formulated in the United States, as well as in revolutionary France, and the nature of the school instruction of the youth of the State came in time to be colored through and through by this new political motive. The necessary schools, though, did not come at once. On the contrary, the struggle to establish these necessary schools it will be our purpose to trace in subsequent chapters, but before doing so we wish first to point out how the rise of a political theory for education led to the development of a theory as to the nature of the educational process which exercised a far-reaching influence on all subsequent evolution of schools and teaching.

QUESTIONS FOR DISCUSSION

1. What do the proposals of La Chalotais, Rolland, and Turgot indicate as to the degree of unification of France attained by the time they wrote?
2. What new subjects did Diderot add to the religious elementary school of his time?
3. Show how the decline in efficiency of the Jesuits was a stimulating force for the evolution of a system of public instruction in France.

4. Show the statesman-like character of the proposals made in the legislative assemblies of France for the organization of national education.
5. Assuming that there had been peace, and funds to carry out the law (1793) of the Convention for primary instruction, what other difficulties would have been met that would have been hard to surmount?
6. Compare the Lakanal school with an American elementary school of a half-century ago.
7. Show that many of the important educational reforms of Napoleon were foreshadowed in the National Convention.
8. Was Napoleon right in his attitude toward education and schools?
9. Explain the lack of success of the revolutionary theorists in the establishment of a state system of education.
10. Explain why the breakdown of the old religious intolerance came earlier in the American Colonies than in the Old World.
11. Show the great value of the Laws of 1642 and 1647 in holding New England true to the maintenance of schools during the period of decline.
12. What might have been the result in America had the New England Colonies established the school as a parish institution, as did the central Colonies?
13. Analyze the Massachusetts constitutional provision for education, and show what it provided for.
14. Show the similarity of the University of the State of New York to the proposals for governmental control in France.
15. Explain why the French revolutionary ideas as to education were realized so easily in the new United States, whereas France did not realize them until well into the nineteenth century.
16. Compare Jefferson's proposed law with the proposals of Talleyrand for France.
17. Just what type of educational institutions did Washington have in mind in the quotation from his Farewell Address? John Jay? John Adams?

SELECTED READINGS

In the accompanying *Book of Readings* the following selections are reproduced:

254. Dabney: The Far-Reaching Influence of Rousseau's Writings.
255. La Chalotais: Essay on National Education.
256. Condorcet: Outline of a Plan for Organizing Public Instruction in France.
257. Report: Founding of the Polytechnic School at Paris.
258. Barnard: Work of the National Convention in France.
(*a*) Various legislative proposals.
(*b*) The Law of 1795 organizing Primary Instruction.
259. American States: Early Constitutional Provisions relating to Education.
260. Ohio: Educational Provisions of First Constitution.
261. Indiana: Educational Provisions of First Constitution.
262. American States: Early School Legislation in.
263. Jefferson: Plan for Organizing Education in Virginia.

QUESTIONS ON THE READINGS

1. Explain the conditions of society under which the emotional writings of a man of the type of Rousseau could have made such a deep impression *(254)* on the nation.

2. In how far do nations to-day accept the theories of La Chalotais (255)?
3. What type of administrative organization was proposed by Condorcet (256)?
4. What does the founding of the Polytechnic School (257) indicate as to the French interest in science?
5. What real progress was made by the National Convention (258 a), and to what degree did it fail?
6. Explain the type of school system proposed and the conception of education lying behind the early constitutional provisions (259) for education in each of the American States.
7. In what respects were the educational provisions of the first Ohio constitution (260) remarkable?
8. In what respects were the educational provisions of the first Indiana constitution (261) remarkable?
9. Characterize the early school legislation reproduced (262).
10. Just what type of educational system did Jefferson propose to organize in Virginia (263)?

SUPPLEMENTARY REFERENCES

Barnard, Henry. *American Journal of Education*, vol. 22, pp. 651–64.
Compayré, G. *History of Pedagogy*, chapters 15, 16, 17.
Cubberley, E. P. *Public Education in the United States*, chapter 3.

CHAPTER XXI

A NEW THEORY AND SUBJECT-MATTER FOR THE ELEMENTARY SCHOOL

In chapters XVII and XVIII we traced the development of educational theory up to the point where John Locke left it (p. 436) after outlining his social and disciplinary theory for the educational process, and in the chapter preceding this one we traced the evolution of a new state theory as to the purpose of education to replace the old religious theory. The new theory as to state control, and the erection of a citizenship purpose for education, made it both possible and desirable that the instruction in the school, and particularly in the vernacular school, should be recast, both in method and content, to bring the school into harmony with the new secular purpose. In consequence, an important reorganization of the vernacular school now took place, and to this transformation of the elementary school we next turn.

I. THE NEW THEORY STATED

Iconoclastic nature of the work of Rousseau. The inspirer of the new theory as to the purpose of education was none other than the French-Swiss iconoclast and political writer, Jean-Jacques Rousseau, whose work as a political theorist we have previously described. Happening to take up the educational problem as a phase of his activity against the political and social and ecclesiastical conditions of his age, drawing freely on Locke's *Thoughts* for ideas, and inspired by a feeling that so corrupt and debased was his age that if he rejected everything accepted by it and adopted the opposite he would reach the truth, Rousseau restated his political theories as to the control of man by society and his ideas as to a life according to "nature" in a book in which he described the education, from birth to manhood, of an imaginary boy, Émile, and his future wife, Sophie. In the first sentence of the book Rousseau sets forth his fundamental thesis:

> All is good as it comes from the hand of the Creator; all degenerates under the hands of man. He forces one country to produce the fruits of another, one tree to bear that of another. He confounds climates, elements, and seasons; he mutilates his dog, his horse, his slave; turns

everything topsy-turvy, disfigures everything. He will have nothing as nature made it, not even man himself; he must be trained like a managed horse, trimmed like a tree in a garden.

His book, published in 1762, in no sense outlined a workable system of education. Instead, in charming literary style, with much sophistry, many paradoxes, numerous irrelevant digressions upon topics having no relation to education, and in no systematic order, Rousseau presented his ideas as to the nature and purpose of education. Emphasizing the importance of the natural development of the child (**R. 264 a**), he contended that the three great teachers of man were nature, man, and experience, and that the second and third tended to destroy the value of the first (**R. 264 b**); that the child should be handled in a new way, and that the most important item in his training up to twelve years of age was to do nothing (**R. 264 c, d**) so that nature might develop his character properly (**R. 264 e**); and that from twelve to fifteen his education should be largely from things and nature, and not from books (**R. 264 f**). As the outcome of such an education Rousseau produced a boy who, from his point of view, would at eighteen still be natural (**R. 264 g**) and unspoiled by the social life about him, which, after all, he felt was soon to pass away (**R. 264 i**). The old religious instruction he would completely supersede (**R. 264 h**).



FIG. 163. THE ROUSSEAU MONUMENT AT GENEVA

So depraved was the age, and so wretched were the educational practices of his time, that, in spite of the malevolent impulse which was his driving force, what he wrote actually contained many excellent ideas, pointed the way to better practices, and became an inspiration for others who, unlike Rousseau, were deeply interested in problems of education and child welfare. One cannot study Rousseau's writings as a whole, see him in his eighteenth-century setting, know of his personal life, and not feel that the far-reaching reforms produced by his *Émile* are among the strangest facts in history.

The *valuable elements* in Rousseau's work. Amid his glitter-

ing generalities and striking paradoxes Rousseau did, however, set forth certain important ideas as to the proper education of children. Popularizing the best ideas of the Englishman, Locke (p. 433), Rousseau may be said to have given currency to certain conceptions as to the education of children which, in the hands of others, brought about great educational changes. Briefly stated, these were:

1. The replacement of authority by reason and investigation.
2. That education should be adapted to the gradually unfolding capacities of the child.
3. That each age in the life of a child has activities which are normal to that age, and that education should seek for and follow these.
4. That physical activity and health are of first importance.
5. That education, and especially elementary education, should take place through the senses, rather than through the memory.
6. That the emphasis placed on the memory in education is fundamentally wrong, dwarfing the judgment and reason of the child.
7. That catechetical and Jesuitical types of education should be abandoned.
8. That the study of theological subtleties is unsuited to child needs or child capacity.
9. That the natural interests, curiosity, and activities of children should be utilized in their education.
10. That the normal activities of children call for expression, and that the best means of utilizing these activities are conversation, writing, drawing, music, and play.
11. That education should no longer be exclusively literary and linguistic, but should be based on sense perception, expression, and reasoning.
12. That such education calls for instruction in the book of nature, with home geography and the investigation of elementary problems in science occupying a prominent place.
13. That the child be taught rather than the subject-matter; life here rather than hereafter; and the development of reason rather than the loading of the memory, were the proper objects of education.
14. That a many-sided education is necessary to reveal child possibilities; to correct the narrowing effect of specialized class education; and t› prepare one for possible changes in fortune.

A new educational ideal presented. Rousseau's *Émile* presented a new ideal in education. According to his conception it was debasing that man should be educated to behave correctly in an artificial society, to follow blindly the doctrines of a faith, or to be an obedient subject of a king. Instead he conceived the function of education to be to evolve the natural powers, cultivate the *human side,* unfold the inborn capacities of every human being,

and to develop a reasoning individual, capable of intelligently directing his life under diverse conditions and in any form of society. A book setting forth such ideas naturally was revolutionary [1] in matters of education. It deeply influenced thinkers along these lines during the remaining years of the eighteenth century, and became the inspiring source of nineteenth-century reforms. As Rousseau's *Social Contract* became the politica handbook of the French Revolutionists, so his *Émile* became the inspiration of a new theory as to the education of children.

Coming, as it did, at a time when political and ecclesiastical despotisms were fast breaking down in France, when new forces were striving for expression throughout Europe, and when new theories as to the functions of government were being set forth in the American Colonies and in France, it gave the needed inspiration for the evolution of a new theory of non-religious, universal, and democratic education which would prepare citizens for intelligent participation in the functions of a democratic State, and for a reorganization of the subject-matter of education itself. A new theory as to the educational purpose was soon to arise, and the whole nature of the educational process, in the hands of others, was soon to be transformed as a result of the fortunate conjunction of the iconoclastic and impractical discussion of education by Rousseau and the more practical work of English, French, and American political theorists and statesmen. Out of the fusing of these, modern educational theory arose.

II. GERMAN ATTEMPTS TO WORK OUT A NEW THEORY

Influence of the *Émile* in German lands. The *Émile* was widely read, not only in France, but throughout the continent of Europe as well. In German lands its publication coincided with the rising tide of nationalism — the "Period of Enlightenment"

[1] "As a man who sought after glory, and whose gloomy temper took umbrage at everything, Rousseau complained that his *Émile* did not obtain the same success as his other writings. He was truly hard to please! The anger of some, the ardent sympathy of others; on the one hand, the parliamentary decrees condemning the book and issuing a warrant for the author's arrest, the thunders of the Church, and the famous mandate of the Archbishop of Paris; on the other hand, the applause of the philosophers, of Clairant, Duclos, and d'Alembert, — what more, then, did he want? *Émile* was burned in Paris and Geneva, but it was read with passion; it was twice translated in London, an honor which no French work had received up to then. In truth never did a book make more noise and thrust itself so much on the attention of men. By its defects, no less than by its qualities, by the inspired and prophetic character of its style, as well as by the paradoxical audacity of its ideas, *Émile* swayed opinion and stirred up the more generous parts of the human soul." (Compayré, G. *Jean-Jacques Rousseau*, p. 100.)

— and the book was warmly welcomed by such (then young) men as Goethe, Schiller, Herder, Richter, Fichte, and Kant. It presented a new ideal of education and a new ideal for humanity, and its ideas harmonized well with those of the newly created aristocracy of worth which the young German enthusiasts were busily engaged in proclaiming for their native land. The ideal of the perfected individual, strong in the consciousness of his powers, now found expression in the new "classics of individualism" which marked the outburst of the best that German literature has ever produced. As Paulsen [1] well says:

> Rousseau exercised an immense influence on his times, and Germany was stirred perhaps even more deeply than France. In France Voltaire continued to be regarded as the great man of his time, whereas, in Germany, his place in the esteem of the younger generation had been taken by the enthusiast of Geneva. Kant, Herder, Goethe, Schiller, Fichte, all of them were roused by Rousseau to the inmost depths of their natures. He gave utterance to the passionate longing of their souls: to do away with the imitation of French courtly culture, by which Nature was suppressed and perverted in every way, to do away with the established political and social order, based on court society and class distinctions, which was felt to be lowering to man in his quality as a reasonable being, and to return to Nature, to simple and unsophisticated habits of life, or rather to find a way through Nature to a better civilisation, which would restore the natural values of life to their rightful place and would be compatible with truth and virtue, sincerity and probity of character.

The great German philosopher, Immanuel Kant (1724–1804), was so deeply stirred by the *Émile* that the regularity of his daily walks and the clearness of his thinking were disturbed by it. Goethe called the book "the teacher's Gospel." Schiller praised Rousseau as "a new Socrates, who of Christians wished to make men." Herder acclaimed Rousseau as a German, and his "divine work" as his guide. Jean-Paul Richter confessed himself indebted to Rousseau for the best ideas in his *Levana*. Lavater declared himself ready for a Reformation in education along the lines laid down by Rousseau.

Basedow and his work. Perhaps the most important practical influence exerted by the *Émile* in German lands came in the work of Johann Bernard Basedow and his followers. Basedow was a North German who had been educated in the *Gymnasium* at Hamburg, had studied in the theological faculty at Leipzig, had been a tutor in a nobleman's family, and had been a teacher in a

[1] Paulsen, Fr., *German Education, Past and Present*, p. 157.

Ritterakademie in Denmark and the *Gymnasium* at Altona. Deeply imbued with the new scientific spirit, in thorough revolt against the dominance of the Church in human lives, and incited to new efforts by his reading of the *Émile*, Basedow thought out a plan for a reform school which should put many of Rousseau's ideas into practice. In 1768 he issued his *Address to Philanthropists and Men of Property on Schools and Studies and their Influence on the Public Weal*, in which he appealed for funds to enable him to open a school to try out his ideas, and to enable him to prepare a new type of textbooks for the use of schools. He proposed in this appeal to organize a school which should be non-sectarian, and also advocated the creation of a National Council of Education to have charge of all public instruction. These were essentially the ideas of the French political reformers of the time. The appeal was widely scattered, awakened much enthusiasm, and subscriptions to assist him poured in from many sources.[1]



FIG. 164. BASEDOW (1723–90)

In 1774 Basedow published two works of more than ordinary importance. The first, a *Book of Method for Fathers and Mothers of Families and of Nations*, was a book for adults, and outlined a plan of education for both boys and girls. The keynotes were "following nature," "impartial religious instruction," children to be dealt with as children, learning through the senses, language instruction by a natural method, and much study of natural objects. The ideas were a combination of those of Bacon, Comenius, and Rousseau. The second book, in four volumes, and containing one hundred copper-plate illustrations, was the famous *Elementary Work* (*Elementarwerk mit Kupfern*) (**R. 266**), the first illustrated school textbook since the *Orbis Pictus* (1654) of Comenius. This work of Basedow's became, in German lands,

[1] Within three years Basedow had collected seven thousand *Reichsthaler*, subscriptions coming to him from such widely scattered sources as Joseph II of Austria, Empress Catherine of Russia, King Christian VII of Denmark, "the wealthy class in Basle," the Abbot of the monastery of Einsiedel in Switzerland, "the royal government of Osnabruck," the Grand Prince Paul, and others. Jews and Freemasons seem to have taken particular interest in his ideas. Freemason lodges in Hamburg, Leipzig, and Göttingen were among the generous contributors.

the *Orbis Pictus* of the eighteenth century. By means of its "natural methods" (**R. 265**) children were to be taught to read, both the vernacular and Latin, more easily and in less time than had been done before, and in addition were to be given a knowledge of morals, commerce, scientific subjects, and social usages by "an incomparable method," founded on experience in teaching children. The book enjoyed a wide circulation among the middle and upper classes in German lands.

Basedow's *Philanthropinum*. In 1774 Prince Leopold, of Dessau, a town in the duchy of Anhalt, in northern Germany, gave Basedow the use of two buildings and a garden, and twelve thousand thalers in money, with which to establish his long-heralded *Philanthropinum*, which was to be an educational institution of a new type. Great expectations were aroused, and a widespread interest in the new school awakened. Education according to nature, with a reformed, time-saving, natural method for the teaching of languages, were to be its central ideas. Children were to be treated as children, and not as adults. Powdered hair, gilded coats, swords, rouge, and hoops were to be discarded for short hair, clean faces, sailor jackets, and caps, while the natural plays of children and directed physical training were to be made a feature of the instruction. The languages were to be taught by conversational methods. Each child was to be taught a handicraft — turning, planing, and carpentering were provided — for both social and educational reasons. Instruction in real things — science, nature — was to take the place of instruction in words, and the vernacular was to be the language of instruction. The institution was to have the atmosphere of religion, but was not to be Catholic, Lutheran, Reformed, or Jewish, and was to be free from "theologizing distinctions." Latin, German, French, mathematics, a knowledge of nature (geography, physics, natural history), music, dancing, drawing, and physical training were the principal subjects of instruction. The children were divided into four classes, and the instruction for each, with the textbooks to be used, was outlined (**R. 265**).

The school opened with Basedow and three assistants as teachers, and two of Basedow's children and twelve others as pupils. Later the school came to have many boarding pupils, drawn from as far-distant points as Riga and Spain. In 1776 a public examination was held, to which many distinguished men were invited, and the work which Basedow's methods could produce was ex-

hibited. These methods seem to have been successful, judging from the rather full accounts which have been left us.[1] The school represented a new type of educational effort, and was frankly experimental in purpose. It was an attempt to apply, in practice, the main ideas of Rousseau's *Émile*. Basedow tried the plan of education outlined by Rousseau with his own daughter, whom he named Émilie.



FIG. 165
IMMANUEL KANT
(1724–1804)

As a promising experiment the school awakened widespread interest, and Basedow was supported by such thinkers of the time as Goethe and Kant. The year following the "Examination" Kant, then professor of philosophy at the University of Königsberg, contributed an article to the *Königsberg Gazette* explaining the importance of the experiment Basedow was making. Still later, in his university lectures *On Pedagogy*, he further stated the importance of such a new experiment, in the following words:

> It was imagined that experiments in education were not necessary; and that, whether any thing in it was good or bad, could be judged of by the reason. But this was a great mistake; experience shows very often that results are produced precisely the opposite to those which had been expected. We also see from experiment that one generation cannot work out a complete plan of education. The only experimental school which has made a beginning toward breaking the path was the Dessau institution. This praise must be given to it, in spite of the many faults which may be charged against it; faults which belong to all conclusions based upon such undertakings; and which make new experiments always necessary. It was the only school in which the teachers had the liberty to work after their own methods and plans, and where they stood in connection, not only with each other, but with men of learning throughout all Germany.

Basedow's influence, and followers. Basedow, though, was an impractical theorist, boastful and quarrelsome, vulgar and coarse, given to drunkenness and intemperate speech, and fond of making claims for his work which the results did not justify. In a few years he had been displaced as director, and in 1793 the *Philanthropinum* closed its doors. The school, nevertheless, was a very

[1] See Barnard's *American Journal of Education*, vol. v, pp. 487–520, for an account of the examinations and the institution.

important educational experiment, and Basedow's work for a time exerted a profound influence on German pedagogical thought. He may be said to have raised instruction in the *Realien* in German lands to a place of distinct importance, and to have given a turn to such instruction which it has ever since retained.[1] The methods of instruction, too, worked out in arithmetic, geography, geometry, natural history, physics, and history were in many ways as revolutionary as those evolved by Pestalozzi later on in Switzerland. In his emphasis on scientific subject-matter Basedow surpassed Pestalozzi, but Pestalozzi possessed a clearer, intuitive insight into the nature and purpose of the educational process. The work of the two men furnishes an interesting basis for comparison (R. 271), and the work of each gave added importance to that of the other.

From Dessau an interest in pedagogical ideas and experiments spread over Europe, and particularly over German lands. Other institutions, modeled after the *Philanthropinum*, were founded in many places, and some of Basedow's followers [2] did as important work along certain lines as did Basedow himself. His followers were numerous, and of all degrees of worth. They urged acceptance of the new ideas of Rousseau as worked out and promulgated by Basedow; vigorously attacked the old schools, making converts here and there; and in a way helped to prepare northern German lands for the incoming, later, of the better-organized ideas of the German-Swiss reformer Pestalozzi, to whose work we next turn.

[1] "The pedagogical character of the *Real*-school was established by Basedow and his followers. Originally the plan was to provide for the middle classes what would be called nowadays manual training schools, in which the scientific principles underlying the various trades and business vocations should have a prominent place. These schools were to be one step removed from the trade schools for the lower classes. But under the influence of the Philanthropinists the *Real*-school was transformed into a modern humanistic school, and placed in competition with the humanistic *Gymnasium*." (Russell, J. E., *German Higher Schools*, pp. 65–66.)

[2] His two most important followers were Joachim Heinrich Campe (1746–1818), who succeeded Basedow at Dessau and later founded a Philanthropinum at Hamburg, and Christian Gotthilf Salzmann (1744–1811), who founded a school at Schnepfenthal, in Saxe-Gotha. Both these men had for a time been teachers with Basedow at Dessau. Campe translated Locke's *Thoughts* and Rousseau's *Émile* into German, wrote a number of books for children (chief among which was the famous *Robinson der Jüngere*), and also prepared a number of treatises for teachers. Salzmann's school, opened in 1784 in the Thuringen forest, made much of gardening, agricultural work, animal study, home geography, nature study, gymnastics, and recreation, as well as book study. It was distinctively a small but high-grade experimental school, so successful that in 1884 it celebrated its one hundredth anniversary. A pupil in the school was Carl Ritter, the founder of modern geographical study.

III. THE WORK AND INFLUENCE OF PESTALOZZI

The inspiration of Pestalozzi. Among those most deeply influenced by Rousseau's *Émile* was a young German-Swiss by the name of Johann Heinrich Pestalozzi, who was born (1746) and brought up in the ancient city of Zurich. Inspired by Rousseau's writings he spent the early part of his life in trying to render service to the poor, and the latter part in working out for himself a theory and a method of instruction based on the natural development of the child. To Pestalozzi, more than to any one else, we owe the foundations of the modern secular vernacular elementary school, and in consequence his work is of commanding importance in the history of the development of educational practice.

Trying to educate his own child according to Rousseau's plan, he not only discovered its impracticability but also that the only way to improve on it was to study the children themselves. Accordingly he opened a school and home on his farm at Neuhof, in 1774. Here he took in fifty abandoned children, to whom he taught reading, writing, and arithmetic, gave them moral discourses, and trained them in gardening, farming, and cheese-making. It was an attempt to regenerate beggars by means of education, which Pestalozzi firmly believed could be done. At the end of two years he had spent all the money he and his wife possessed, and the school closed in failure — a blessing in disguise — though with Pestalozzi's faith in the power of education unshaken. Of this experiment he wrote: "For years I have lived in the midst of fifty little beggars, sharing in my poverty my bread with them, living like a beggar myself in order to teach beggars to live like men."

Turning next to writing, while continuing to farm, Pestalozzi now tried to express his faith in education in printed form. His *Leonard and Gertrude* (1781) was a wonderfully beautiful story of Swiss peasant life, and of the genius and sympathy and love of a woman amid degrading surroundings. From a wretched place the village of Bonnal, under Pestalozzi's pen, was transformed by the power of education.[1] The book was a great success from the

[1] "The picture shown in *Leonard and Gertrude* is very crude. Everywhere is visible the rough hand of the painter, a strong, untiring hand, painting an eternal image, of which this in paper and print is the merest sketch. . . . Read it and see how puerile it is, how too obvious are its moralities. Read it a second time, and note how earnest it is, how exact and accurate are its peasant scenes. Read it yet again, and recognize in it the outpouring of a rare soul, working, pleading, ready to be despised, for fellow souls." (J. P. Monroe, *The Educational Ideal*, p. 182.)

first, and for it Pestalozzi was made a "citizen" of the French Republic, along with Washington, Madison, Kosciusko, Wilberforce, and Tom Paine. He continued to farm and to think, though nearly starving, until 1798, when the opportunity for which he was really fitted came.

Pestalozzi's educational experiments. In 1798 "The Helvetic Republic" was proclaimed, an event which divided Pestalozzi's life into two parts. Up to this time he had been interested wholly in the philanthropic aspect of education, believing that the poor could be regenerated through education and labor. From this time on he interested himself in the teaching aspect of the problem, in the working-out and formulation of a teaching method based on the natural development of the child, and in training others to teach. Much to the disgust of the authorities of the new Swiss Government, citizen Pestalozzi applied for service as a schoolteacher. The opportunity to render such service soon came.

That autumn the French troops invaded Switzerland, and, in putting down the stubborn resistance of the three German cantons, shot down a large number of the people. Orphans to the number of 169 were left in the little town of Stanz, and citizen Pestalozzi was given charge of them. For six months he was father, mother, teacher, and nurse. Then, worn out himself, the orphanage was changed into a hospital. A little later he became a schoolmaster in Burgdorf; was dismissed; became a teacher in another school; and finally, in 1800, opened a school himself in an old castle there. He now drew about him other teachers interested in improving instruction, and in consequence could specialize the work. He provided separate teachers for drawing and singing, geography and history, language and arithmetic, and gymnastics. The year following the school was enlarged into a teachers' training-school, the government extending him aid in return for giving Swiss teachers one month of training as teachers in his school. Here he wrote and published *How Gertrude teaches her Children*, which explained his methods and forms his most important pedagogical work (**R. 267**); a *Guide for teaching Spelling and Reading;* and a *Book for Mothers*, devoted to a description of "object teaching." In 1803, the castle being needed by the government, Pestalozzi moved first to Munchenbuchsee, near Hofwyl, opening his Institute temporarily in an old convent there. For a few months, in 1804, he was associated with Emanuel von

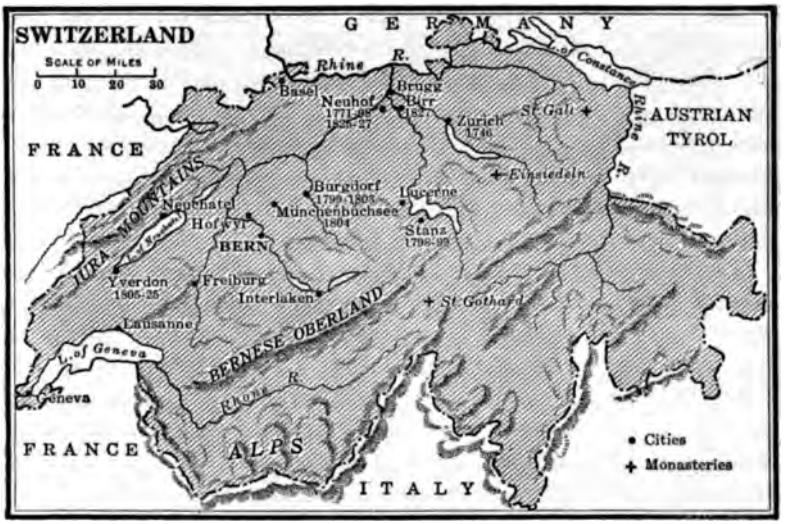


FIG. 166. THE SCENE OF PESTALOZZI'S LABORS

Fellenberg, at Hofwyl (p. 546), but in October, 1804, he moved to Yverdon, where he reëstablished the Institute, and where the next twenty years of his life were spent and his greatest success achieved.

The contribution of Pestalozzi. The great contribution of Pestalozzi lay in that, following the lead of Rousseau, he rejected the religious aim and the teaching of mere words and facts, which had characterized all elementary education up to near the close of the eighteenth century, and tried instead to reduce the educational process to a well-organized routine, based on the natural and orderly development of the instincts, capacities, and powers of the growing child. Taking Rousseau's idea of a return to nature, he tried to apply it to the education of children. This led to his rejection of what he called the "empty chattering of mere words" and "outward show" in the instruction in reading and the catechism, and the introduction in their place of real studies, based on observation, experimentation, and reasoning. "Sense impression" became his watchword.[1] As he expressed it, he

[1] "When I now look back and ask myself: What have I specially done for the very being of education, I find I have fixed the highest supreme principle of instruction in the recognition of *sense impression as the absolute foundation of all knowledge.* Apart from all special teaching I have sought to discover the nature of teaching itself, and the prototype, by which nature herself has determined the instruction of our race." (*Pestalozzi, How Gertrude teaches her* Children, X, § 1.)

"tried to organize and psychologize the educational process" by harmonizing it with the natural development of the child (R. 267). To this end he carefully studied children, and developed his methods experimentally as a result of his observation. To this end, both at Burgdorf and Yverdon, all results of preceding teachers and writers on education were rejected, for fear that error might creep in. Read nothing, discover everything, and prove all things, came to be the working guides of himself and his teachers.

The development of man he believed to be organic, and to proceed according to law. It was the work of the teacher to discover these laws of development and to assist nature in securing "a natural, symmetrical, and harmonious development" of all the "faculties" of the child. Real education must develop the child as a whole — mentally, physically, morally — and called for the training of the head and the hand and the heart. The only proper means for developing the powers of the child was use, and hence education must guide and stimulate self-activity, be based on intuition and exercise, and the sense impressions must be organized and directed. Education, too, if it is to follow the organic development of the child, must observe the proper progress of child development and be graded, so that each step of the process shall grow out of the preceding and grow into the following stage. To accomplish these ends the training must be all-round and harmonious; much liberty must be allowed the child in learning; education must proceed largely by doing instead of by words, the method of learning must be largely analytical; real objects and ideas must precede symbols and words; and, finally, the organization and correlation of what is learned must be looked after by the teacher.

Still more, Pestalozzi possessed a deep and abiding faith, new at the time, in the power of education as a means of regenerating society. He had begun his work by trying to "teach beggars to live like men," and his belief in the potency of education in working this transformation, so touchingly expressed in his *Leonard and Gertrude*, never left him. He believed that each human being could be raised through the influence of education to the level of an intellectually free and morally independent life, and that every human being was entitled to the right to attain such freedom and independence. The way to this lay through the full use of his *developing* powers, under the guidance of a teacher, and not *through* a process of repeating words and learning by heart. Not



PLATE 4. PESTALOZZI MONUMENT AT YVERDON

A picture of this monument occupies a prominent place in every schoolroom in Switzerland.



only the intellectual qualities of perception, judgment, and reasoning need exercise, but the moral powers as well. To provide such exercise and direction was the work of the school.

Pestalozzi also resented the brutal discipline which for ages had characterized all school instruction, believed it by its very nature immoral, and tried to substitute for this a strict but loving discipline — a "thinking love," he calls it — and to make the school as nearly as possible like a gentle and refined home. To a Swiss father, who on visiting his school exclaimed, "Why, this is not a school, but a family," Pestalozzi answered that such a statement was the greatest praise he could have given him.

The consequences of these ideas. The educational consequences of these new ideas were very large. They in time gave aim and purpose to the elementary school of the nineteenth century, transforming it from an instrument of the Church for church ends, to an instrument of society to be used for its own regeneration and the advancement of the welfare of all.[1] The introduction of the study of natural objects in place of words, and much talking about what was seen and studied instead of parrot-like reproductions of the words of a book, revolutionized both the methods and the subject-matter of instruction in the developing elementary school. Observation and investigation tended to supersede mere memorizing; class discussion and thinking to supersede the reciting of the words of the book; thinking about what was being done to supersede routine learning; and class instruction to supersede the wasteful individual teaching which had for so long characterized all school work. It meant the reorganization of the work of the vernacular school on a modern basis, with class organization and group instruction, and a modern-world purpose (**R. 269**).

The work of Pestalozzi also meant the introduction of new subject-matter for instruction, the organization of new teaching subjects for the elementary school, and the redirection of the elementary education of children. Observation led to the development of elementary-science study, and the study of home geography; talking about what was observed led to the study of

[1] "What he did was to emphasize the new purpose in education, but vaguely perceived, where held at all, by others; to make clear the new meaning of education which existed in rather a nebulous state in the public mind; to formulate an entirely new method, based on new principles, both of which were to receive a further development in subsequent times, and to pass under his name; and finally, to give an entirely new spirit to the schoolroom." (Monroe, Paul, *Text Book in the History of Education*, p. 600.)

language usage, as distinct from the older study of grammar; and counting and measuring led to the study of number, and hence to a new type of primary arithmetic. The reading of the school also changed both in character and purpose. In other words, in place of an elementary education based on reading, a little writing and spelling, and the catechism, all of a memoriter type and with religious ends in view, a new primary school, essentially secular in character, was created by the work of Pestalozzi. This new school was based on the study of real objects, learning through sense impressions, the individual expression of ideas, child activity, and the development of the child's powers in an orderly way. In fact, "the development of the faculties" of the child became a by-word with Pestalozzi and his followers.

Pestalozzi's deep abiding faith in the power of education to regenerate society was highly influential in Switzerland, throughout western Europe, and later in America in showing how to deal with orphans, vagrants, and those suffering from physical defects or in need of reformation, by providing for such a combination of intellectual and industrial training.

The spread and influence of Pestalozzi's work. So famous did the work of Pestalozzi become that his schools at Burgdorf and Yverdon came to be "show places," even in a land filled with natural wonders. Observers and students came from America (**R. 268**) and from all over Europe to see and to teach in his school, and draw inspiration from seeing his work (**R. 270**) and talking with him.[1] In particular the educators of Prussia were attracted by his work, and, earlier than other nations, saw the far-reaching significance of his discoveries. Herbart visited his school as early as 1799, when but a young man of twenty-three, and wrote a very sympathetic description of his new methods. Froebel spent the years 1808 to 1810 as a teacher at Yverdon, when he was a young

[1] In 1809 the German, Carl Ritter, a former pupil of Campe (see footnote 2, p. 538) and the creator of modern geographical study, visited Pestalozzi at Yverdon. Of this visit he writes:

"I have seen more than the paradise of Switzerland, I have seen Pestalozzi, I have learned to know his heart and his genius. Never have I felt so impressed with the sanctity of my vocation as when I was with this noble son of Switzerland. I cannot recall without emotion this society of strong men, struggling with the present, with the aim of clearing the way for a better future, men whose only joy and reward is the hope of raising the child to the dignity of man.

"I left Yverdon resolved to fulfill my promise made to Pestalozzi to carry his method into geography. . . . Pestalozzi did not know as much geography as a child in our Primary Schools, but, none the less, have I learned that science from him, for it was in listening to him that I felt awaken within me the instinct of the natural methods; he showed me the way." (Guimps, Baron de, *Pestalozzi, his Aim and Work*, p. 167.)

man of twenty-six to eight. • "It soon became evident to me," wrote Froebel, "that 'Pestalozzi' was to be the watchword of my life." The philosopher Fichte, whose Addresses (1807–08) on the condition of the German people (page 568), after their humiliating defeat by Napoleon, did much to reveal to Prussia the possibilities of national regeneration by means of education, had taught in Zurich, knew Pestalozzi, and afterward exploited his work and his ideas in Berlin.[1] As early as 1803 an envoy, sent by the Prussian King,[2] reported favorably on Pestalozzi's work, and in 1804 Pestalozzian methods were authorized for the primary schools of Prussia. In 1808 seventeen teachers were sent to Switzerland, at the expense of the Prussian Government, to spend three years in studying Pestalozzi's ideas and methods. On their return, these and others spread Pestalozzian ideas throughout Prussia. A pastor and teacher from Würtemberg, Karl August Zeller (1774–1847), came to Burgdorf in 1803 to study. In 1806 he opened a training-school for teachers in Zurich, and there worked out a plan of studies based on the work of Pestalozzi. This was printed and attracted much attention. In 1808 the King of Würtemberg listened to five lectures on Pestalozzian methods by Zeller, and invited him to a position as school inspector in his State. Before he had done but a few months' work he was called to Prussia, to organize a normal school and begin the introduction of Pestalozzian ideas there. From Prussia the ideas and methods of Pestalozzi gradually spread to the other German States.

Many Swiss teachers were trained by Pestalozzi, and these also helped to extend his work and ideas over Switzerland. Particularly in German Switzerland did his ideas take root and reorganize education. As a result modern systems of education made an early start in these cantons. One of Pestalozzi's earliest and most faithful teachers, Hermann Krüsi, became principal of the Swiss normal school at Gais, and trained teachers there in Pestalozzian

[1] The young German student of geology and mineralogy, Karl George von Raumer (1783–1865), was in Paris, in 1808. While there he read Pestalozzi's *How Gertrude teaches her Children*, and what Fichte had said of his work in his *Addresses to the German Nation* (see chapter XXII). These sent him to Yverdon to see for himself. He remained two years, and returned to Germany as a teacher. In 1846 he published his four-volume *Geschichte der Pädagogik*, the first important history of education to be written.

[2] In 1814 King Frederick William III himself visited Pestalozzi, at Neufchatel. His queen, Louise, was deeply touched by reading the *Émile*, and frequently spent hours in the Prussian schools witnessing work conducted after the ideas of Pestalozzi.

methods. Zeller's pupils, too, did much to spread his influence among the Swiss. Pestalozzi's ideas were also carried to England, but in no such satisfactory manner as to the German States. Where German lands received both the method and the spirit, the English obtained largely the form. Later Pestalozzian ideas came to the United States, at first largely through English sources, and, after about 1860, resulted in a thoroughgoing reorganization of American elementary education.

After Pestalozzi's institution had become celebrated, and visitors and commissions from many countries had visited him and it, and after governments had vied with one another in introducing Pestalozzian methods and reforms, the vogue of the Pestalozzian ideas became very extended. Many excellent private schools were founded on the Pestalozzian model, while on the other hand self-styled Pestalozzian reformers sprang up on all sides. All this imitation was both natural and helpful; the foolishness and charlatanism in time disappeared, leaving a real advance in the educational conception.

The manual-labor school of Fellenberg. Of the Swiss associates and followers of Pestalozzi one of the most influential was Phillip Emanuel von Fellenberg (1771–1844). The son of a Swiss official of high political and social position, possessed of wealth, having traveled extensively, Fellenberg, having become convinced that correct early education was the only means whereby the State might be elevated and the lot of man made better, resolved (1805) to devote his life and his fortune to the working-out of his ideas. For a short time associated with Pestalozzi, he soon withdrew and established, on his own estate, an Institution which later (1829) came to comprise the following:

1. A farm of about six hundred acres.
2. Workshops for manufacturing clothing and tools.
3. A printing and lithographing establishment.
4. A literary institution for the education of the well-to-do.
5. A lower or *real* school, which trained for handicrafts and middle-class occupations.
6. An agricultural school for the education of the poor as farm laborers, and as teachers for the rural schools.

By 1810 the Institution had begun to attract attention, and soon pupils and visitors came from distant lands to study in and to examine the schools. The agricultural school in particular aroused interest. More than one hundred Reports (R. 272) were pub-



PLATE 12. FELLENBERG'S INSTITUTE AT HOFWYL

The first Agricultural and Mechanical College. This school contained the germ-idea of all our agricultural education.



lished, in Europe and America, on this very successful experiment in a combined intellectual and manual-labor type of education. Fellenberg died in 1844, and his family discontinued the school in 1848.

Fellenberg's work was a continuation of the social-regeneration conception of education held by Pestalozzi, and contained the germ-idea of all our agricultural and industrial education. His plan was widely copied in Switzerland, Germany, England, and the United States. It was well suited to the United States because of the very democratic conditions then prevailing among an agricultural people possessed of but little wealth. The plan of combining farming and schooling made for a time a strong appeal to Americans, and such schools were founded in many parts of the country. The idea at first was to unite training in agriculture with schooling, but it was soon extended to the rapidly rising mechanical pursuits as well. The plan, however, was rather short-lived in the United States, due to the rise of manufacturing and the opening of rich and cheap farms to the westward, and lasted with us scarcely two decades. A generation later it reappeared in the Central West in the form of a new demand for colleges to teach agricultural and mechanical arts, but with the manual-labor idea omitted. This we shall refer to again, later on (chapter XXIX).



FIG. 167. FELLENBERG (1771–1844)

IV. REDIRECTION OF THE ELEMENTARY SCHOOL

Significance of this work. Though some form of parish school for the elements of religious instruction had existed in many places during the later Middle Ages, and foundations providing for some type of elementary instruction had appeared here and there in almost all lands, the elementary vernacular school, as we have previously pointed out, was nevertheless clearly the outcome of the Protestant movement in the sixteenth century, and in its origin was essentially a child of the Church. A child of the Church, too, for more than two centuries the elementary vernacular *school remained.* During these two centuries the elementary

school made slow but rather unsatisfactory progress, due largely to there being no other motive for its maintenance or expansion than the original religious purpose. Only in the New England Colonies in North America, in some of the provinces of the Netherlands, and in a few of the German States had any real progress been made in evolving any different type of school out of this early religious creation, and even in these places the change was in form of control rather than in subject-matter or purpose. The school remained religious in purpose, even though its control was beginning to pass from the Church to the State.

Now, within half a century, beginning with the work of Rousseau (1762), and by means of the labors of the political philosophers of France, the Revolutionary leaders in the American Colonies, the legislative Assemblies and Conventions in France, and the experimental work of Basedow and his followers in German lands and of Pestalozzi and his disciples in Switzerland, the whole purpose and nature of the elementary vernacular school was changed. The American and French political revolutions and the more peaceful changes in England had ushered in new conceptions as to the nature and purpose and duties of government. As a consequence of these new ideas, education had come to be regarded in a new light, and to assume a new importance in the eyes of statesmen. In place of schools to serve religious and sectarian ends, and maintained as an adjunct of the parishes or of a State Church, the elementary vernacular school now came to be conceived of as an instrument of the State, the chief purpose of which was to serve state ends. Some time would, of course, be required to develop the state support necessary to effect the complete transformation in control, and the forces of reaction would naturally delay the process as much as possible, but the theory of state purpose had at last been so effectively proclaimed, and the forces of a modern world were pushing the idea so steadily forward, that it was only a question of time until the change would be effected.

A new impetus for change in control. Basedow and Pestalozzi, too, had given the movement for a transfer of control a new impetus by working out new methods in instruction and in organizing new subject-matter for the school, and methods and subject-matter which harmonized with the spirit and principles of the new democracy that had been proclaimed. Pestalozzi in particular had sought, guided by a clearer insight into the educational prob-

lem than Basedow possessed (R. 271), to create a school in which children might, under the wise guidance of the teacher, develop and strengthen their own "faculties" and thus evolve into reasoning, self-directing human beings, fitted for usefulness and service in a modern world. To make intelligent and reasoning individuals of all citizens, to develop moral and civic character, to train for life in organized society, and to serve as an instrument by means of which an ignorant, drunken, immoral, and shiftless working-class and peasantry might be elevated into men and women of character, intelligence, and directive power, was in Pestalozzi's conception the underlying meaning of the school. After Pestalozzi, the earlier conception as to the religious purpose of the elementary vernacular schools, by means of which children were to be trained almost exclusively "in the principles of our holy religion" and to become "loyal church members," and to "fit them for that station in life in which it hath pleased their Heavenly Father to place them," was doomed. In its stead there was certain to arise a newer conception of the school as an instrument of that form of organized society known as the State, and maintained by the State to train its future citizens for intelligent participation in the duties and obligations of citizenship, and for social, moral, and economic efficiency.

The way now becoming clear. After two hundred and fifty years of confusion and political failure, the way was now at last becoming clear for the creation of national instead of church systems of elementary education, and for the firm establishment of the elementary vernacular school as an important obligation to its future citizens of every progressive modern State and the common birthright of all. This became distinctively the work of the nineteenth century. It also became the work of the nineteenth century to gather up the old secondary-school and university foundations, accumulated through the ages, and remould them to meet modern needs, fuse them into the national school systems created, and connect them in some manner with the people's schools. To see how this was done we next turn to the beginnings of the organization of national school systems in the German States, France, Italy, England, and the United States. These may be taken as types. As Prussia was the first modern State to grasp the significance of national education, and to organize state schools, we shall begin our study by first tracing the steps by which this transformation was effected there.

QUESTIONS FOR DISCUSSION

1. Compare the statement of the valuable elements in the theories of Rousseau (p. 530) with the main ideas of Basedow (p. 535); Ratke (p. 607); Comenius (p. 409).
2. Do we accept all the fourteen points of Rousseau's theory to-day?
3. Might a Rousseau have done work of similar importance in Russia, early in the twentieth century? Why?
4. Explain the educational significance of "self-activity," "sense impressions," and "harmonious development."
5. What were the strong points in the experimental work of Basedow?
6. Explain the great enthusiasm which his rather visionary statements and plans awakened.
7. Show the importance of such work as that of Basedow in preparing the way for better-organized reform work.
8. How far was Pestalozzi right as to the power of education to give men intellectual and moral freedom?
9. What do you understand Pestalozzi to have meant by "the development of the faculties"?
10. State the importance of the work of Pestalozzi from the point of view of showing the world how to deal with orphans and defectives.
11. Show how the germs of agricultural and technical education lay in the work of Fellenberg.
12. Explain the greater popularity of the *Émile* in German lands.
13. State the change in subject-matter and aims from the vernacular church school to the school as thought out by Pestalozzi.
14. Show that it was a fortunate conjunction that brought the work of Pestalozzi alongside of that of the political reformers of France.
15. What differences might there have been had Comenius lived and done his work in the time of Pestalozzi?

SELECTED READINGS

In the accompanying *Book of Readings* the following selections, illustrative of the contents of this chapter, are reproduced:

264. Rousseau: Illustrative Selections from the *Émile*.
265. Basedow: Instruction in the *Philanthropinum*.
266. Basedow: A Page from the *Elementarwerk*.
267. Pestalozzi: Explanation of his Work.
268. Griscom: A Visit to Pestalozzi at Yverdon.
269. Woodbridge: An Estimate of Pestalozzi's Work.
270. Dr. Mayo: On Pestalozzi.
271. Woodbridge: Work of Pestalozzi and Basedow compared.
272. Griscom: Hofwyl as seen by an American.

QUESTIONS ON THE READINGS

1. Show the fallacy of Rousseau's reasoning (**264 d**) as to society being a denominator which prevents man from realizing himself.
2. What are the elements of truth and falsity in Rousseau's idling-to-the-twelfth-year (**264 b**) idea?
3. Would such a training up to twelve (**264 e**) be possible, or desirable?
4. *What type* of education is presupposed in **264 f**?
5. *Show the* similarity in the conceptions of the Orbis *Pictus* (**221**) and the *Elementarwerk* (**266**).

6. What types of schools and conceptions of education were combined in the Philanthropinum (**265**)?
7. Just what did Pestalozzi attempt (**267**) to accomplish?
8. Compare the accounts as to purpose and instruction given by Pestalozzi (**267**) and Griscom (**268**).
9. What do the tributes of Woodbridge (**269**) and Mayo (**270**) reveal as to the character of Pestalozzi and his influence?
10. Analyze the courses of instruction (**272**) at Hofwyl.
11. State the points of similarity and difference between the work of Basedow and Pestalozzi (**271**), and the points of superiority in the work of Pestalozzi.

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*Krüsi, Hermann, Jr. *Life and Work of Pestalozzi.*
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*Pestalozzi, J. H. *Leonard and Gertrude.*
Pestalozzi, J. H. *How Gertrude teaches her Children.*
Pinloche, A. *Pestalozzi and the Foundations of the Modern Elementary School.*

CHAPTER XXII

NATIONAL ORGANIZATION IN PRUSSIA

I. THE BEGINNINGS OF NATIONAL ORGANIZATION

Early German progress in school organization. The first modern nation to take over the school from the Church, and to make of it an instrument for promoting the interests of the State was Prussia, and the example of Prussia was soon followed by the other German States. The reasons for this early action by the German States will be clear if we remember the marked progress made in establishing state control of the churches (p. 318) which followed the Protestant Revolts in German lands. Figure 96, page 319, reëxamined now, will make the reason for the earlier evolution of state education in Germany plain. Würtemberg, as early as 1559, had organized the first German state-church school system, and had made attendance at the religious instruction compulsory on the parents of all children. The example of Würtemberg was followed by Brunswick (1569), Saxony (1580), Weimar (1619), and Gotha (1642). In Weimar and Gotha the compulsory-attendance idea had even been adopted for elementary-school instruction to all children up to the age of twelve.

By the middle of the seventeenth century most of the German States, even including Catholic Bavaria, had followed the example of Würtemberg, and had created a state-church school system which involved at least elementary and secondary schools and the beginnings of compulsory school attendance. Notwithstanding the ravages of the Thirty Years' War (1618–48), the state-church schools of German lands contained, more definitely than had been worked out elsewhere, the germs of a separate state school organization. Only in the American Colonies (p. 364) had an equal development in state-church organization and control been made. As state-church schools, with the religious purpose dominant, the German schools remained until near the middle of the eighteenth century. Then a new movement for state control began, and within fifty years thereafter they had been transformed into institutions of the State, with the state purpose their most essential characteristic. How this transformation was effected in Prussia,

the leader among the German States, and the forces which brought about the transformation, it will be the purpose of this chapter to relate.

The new University of Halle. The turning-point in the history of German educational progress was the founding of the University of Halle, in 1694. This institution, due to its entirely new methods of work, has usually been designated as the first modern university. A few forward-looking men, men who had been expelled from Leipzig because of their critical attitude and modern ways of thinking, were made professors here. Its creation was due to the sympathy for these men felt by the Elector Friedrich III of Brandenburg, later the first King of Prussia. The King clearly intended that the new institution should be representative of modern tendencies in education. To this end he installed as professors men who could and would reform the instruction in theology, law, medicine, and philosophy.

In consequence Aristotle was displaced for the new scientific philosophy of Descartes and Bacon, and Latin in the classrooms for the German speech. The sincere pietistic faith of Francke (p. 418) was substituted for the Lutheran dogmatism which had supplanted the earlier Catholic. The instruction in law was reformed to accord with the modern needs and theory of the State. Medical instruction, based on observation, experimentation, and deduction, superseded instruction based on the reading of Hippocrates and Galen. The new sciences, especially mathematics and physics, found a congenial home in the philosophical or arts faculty. Free scientific investigation and research, without interference from the theological faculty, were soon established as features of the institution, and in place of the fixed scientific knowledge taught for so long from the texts of Aristotle (Rs. 113-15) and other ancients, a new and changing science, that must prove its laws and axioms, and which might at any time be changed by the investigation of any teacher or student, here now found a home. Under the leadership of Christian Wolff, who was Professor of Philosophy from 1707 to 1723, when he was banished by a new King at the instigation of the Pietists for his too great liberalism in religion, and again from 1740 to 1754, after his recall by Frederick the Great,[1] philosophy was "made to speak German" and the Aristotelian philosophy was permanently dis-

[1] One of the first acts of the reign of Frederick the Great was to recall Wolff from banishment. In doing so he said: "A man that seeks truth, and loves it, must be reckoned precious in any human society."

placed. "Nothing without sufficient cause" was the ruling principle of Wolff's teaching.

Changes wrought in old established procedure. The introduction of the new scientific and mathematical and philosophical studies soon changed the arts or philosophy faculty from a preparatory faculty for the faculties of law, medicine, and theology, as it had been for centuries, to the equal of these three professional faculties in importance, while the elementary instruction in Latin and Greek was now relegated to the *Gymnasia* below. These were now in turn changed into preparatory schools for all four faculties of the university. The university instruction in the ancient languages was now placed on a much higher plane, and a new humanistic renaissance took place (p. 462) which deeply influenced both university and gymnasial training. New standards of taste and judgment were drawn from the ancient literatures and applied to modern life, and students were trained to read and enjoy the ancient classics. This reawakening of the best spirit of the Italian Renaissance marked the first outburst of a national feeling of a people as yet possessed of no national literature of importance, but unwilling longer to depend on foreign (French) influences for the cultural elements in their intellectual life.

It was at Halle, too, that Gundling, in 1711, discussed "the office of a university" and laid down the modern university theory of *Lehrfreiheit und Lernfreiheit* — that is, freedom from outside interference in teaching and studying, both teachers and students to be free to follow the truth wherever the truth might lead, and without reference to what preconceived theories might be upset thereby. This was a revolution in university procedure,[1] and the importance of the establishment of this new conception of university work can scarcely be overestimated. It was a contribution to intellectual progress of large future value. It meant the end of the old-type university, ruled by a narrow theological dogmatism and maintained to give support to a particular religious faith, and the ultimate transformation of the old university foun-

[1] "It was a bold declaration, but one which exactly described the great change which had taken place. The older university instruction was everywhere based upon the assumption that the truth had already been given, that instruction had to do with its transmission only, and that it was the duty of the controlling authorities to see to it that no false doctrines were taught. The new university instruction began with the assumption that the truth must be discovered, and that it was the duty of instruction to qualify and guide the student in this task. By assuming *this attitude* the university was the first to accept the consequences of the conditions which the Reformation had created." (Paulsen, Fr., *The German Universities, p. 46.)*

dations into institutions actuated by the methods and purposes of a modern world.

In 1734 another new university was founded at Göttingen, and in this Johann Matthias Gesner (1691–1761) raised the new humanistic learning to the place of first importance. This new university became a nursery for the new literary humanism, ably supplementing the work done at Halle. From these two universities teachers of a new type went out, filled with the spirit of "The Enlightenment," as this eighteenth-century German renaissance was called, and they in time regenerated all the German universities. Still more, they regenerated the secondary schools of German lands as well, and gave Greek literature and life that place of first importance in their instruction which was retained until the latter part of the nineteenth century. Gesner at Göttingen, and later Ernesti at Leipzig, did much to formulate the new pedagogical purpose [1] of instruction in the ancient languages and literatures for the higher schools of German lands.

The earliest school laws for Prussia. In 1713 there came to the kingship of Prussia an organizing genius in the person of Frederic William I (1713–40). Under his direction Prussia was given, for the first time, a centralized and uniform financial administration, and the beginnings of state school organization were made. He freed the State from debt, provided it with a good income, developed a strong army, and began a vigorous colonization and commercial policy. Though he cared nothing and did nothing for the universities, the religious reform movement of Francke, as well as his educational undertakings (p. 419), found in the new King a warm supporter. Largely in consequence of this the King became deeply interested in attempts to improve and advance the education of the masses of his people.

The first year of his reign he issued a Regulatory Code for the Reformed Evangelical and Latin schools of Prussia, and in 1717 he issued the so-called "Advisory Order," relating to the people's schools. In this latter parents were urged, under penalty of "vigorous punishment," to send their children to school to learn

[1] "He who reads the works of the ancients will enjoy the acquaintance of the greatest men and the noblest souls who ever lived, and will get in this way, as it happens in all refined conversation, beautiful thoughts and expressive words.

"We thus receive, in early childhood, doctrines and philosophy and wisdom of life from the wisest and best educated men of all ages; we thus learn to recognize and understand clearness, dignity, charm, ingenuity, delicacy, and elegance in language and action, and gradually accustom ourselves to them." (Gesner, Johann *Matthias.)*

religion, reading, writing, to calculate, and "all that could serve to promote their happiness and welfare." The tuition fees of poor children he ordered paid out of the community poor-box (R. 273). The following year he directed the authorities of Lithuania to relieve the existing ignorance there, and sent commissioners to provide the villages with schoolmasters. From time to time he



FIG. 168. THE SCHOOL OF A HANDWORKER
Conducted in his home. A gentleman visiting the school. After a drawing in the German School Museum in Berlin.

renewed his directions. To insure a better class of teachers for the towns and rural schools, he, in 1722, directed that no one be admitted to the office of sacristan-schoolmaster [1] except tailors, weavers, smiths, wheelwrights, and carpenters, and in 1738 he further restricted the position of teacher in the town and rural schools to tailors.

Becoming especially interested in providing schools for the previously neglected province of East Prussia, he gave the sum of

[1] *The sacristan* or custodian of the church was frequently also the teacher of the *elementary school*, the two offices being combined in one person. Out of this combination the elementary teacher was later evolved. (See p. 446.)

fifty thousand thalers as an endowment fund, the interest to be used in assisting communities to build schoolhouses and maintain schools, and he also set aside large tracts of land for school uses. Within a few years over a thousand elementary schools had been established, and some eighteen hundred new schools in Prussia owed their origin to the interest of this King. He also took a similar interest in the establishment of schools in Pomerania (**R.** 273), a part of which had but recently been wrested from Sweden.

In 1737 the King issued his celebrated *Principia Regulative*, which henceforth became the fundamental School Law for the province of East Prussia. This prescribed conditions for the building of schoolhouses, the support of the schoolmaster, tuition fees, and government aid. The following digest of the section of the *Principia* relating to these matters gives a good idea as to the nature of the school regulations the King sought to enforce:

1. The parishes forming school societies were obliged to build schoolhouses and to keep them in repair.
2. The State was to furnish the necessary timber and firewood.
3. The expenses for doors, windows, and stoves to be obtained from collections.
4. Every church to pay four thalers a year toward the support of the schoolmaster.
5. Tuition fees for each child, from four to twelve years of age, to be four groschen per year.
6. Government to pay the fee when a peasant sends more than one child to school.
7. The peasants to furnish the teacher with certain provisions.
8. The teacher to have the right of free pasture for his small stock and some fees from every child confirmed.
9. Government to give the teacher one acre of land, which villagers were to till for him.

In 1738 the King further regulated the private schools and teachers in and about Berlin, in particular dealing with their qualifications and fees. The King showed, for the time, an interest in and solicitude for the education of his people heretofore almost unknown. That his decrees were in advance of the possibilities of the people in the matter of school support is not to be wondered at. Still, they rendered useful service in preparing the way for further organizing work by his successors, and in particular in accustoming the people to the ideas of state oversight and local school support. Under his successor and son, Frederick the Great, the preparatory work of the father bore important fruit.

The organizing work of Frederick the Great. In 1740 Frederick II, surnamed the Great, succeeded his father, and in turn guided the destinies of Prussia for forty-six years. His benevolently despotic rule has been described on a preceding page (p. 474). Here we will consider only his work for education. In 1740, 1741, and again in 1743 he issued "regulations concerning the support of schools in the villages of Prussia," in which he directed that new schools should be established, teachers provided for them, and that "the existing school regulations and the arrangements made in pursuance thereto should be permanent, and that no change should be made under any pretext whatever."

In 1750 he effected a centralization of all the provincial church consistories, except that of Catholic Silesia, under the Berlin Consistory. This was a centralizing measure of large future importance, as it centralized the administration of the schools, as well as that of the churches, and transformed the Berlin Consistory into an important administrative agent of the central government. To this new centralized administrative organization the King issued instructions to pay special attention to schools, in order that they might be furnished with able schoolmasters and the young be well educated. One of the results of this centralization was the gradual evolution of the modern German *Gymnasien*, with uniform standards and improved instruction, out of the old and weakened Latin schools of various types within the kingdom.

From 1756 to 1763 Frederick was engaged in a struggle for existence, known as the Seven Years' War, but as soon as peace was at hand the King issued new regulations "concerning the maintenance of schools," and began employing competent schoolmasters for his royal estates. In April, 1763, he issued instructions to have a series of general school regulations prepared for all Prussia. These were drawn up by Julius Hecker, a former pupil and teacher in Francke's Institution (p. 418) and now a pastor in Berlin and counselor for the Berlin Consistory. After approval by the King, these were issued, September 23, 1763, under the title of *General Land-Schule Reglement* (general school regulations for the rural and village schools) of all Prussia (**R. 274**). These new regulations constituted the first general School Code for the whole kingdom, and mark the real foundation of the Prussian elementary-school system. Two years later (1765) a similar but stronger set of regulations or Code was drawn up and promulgated for the government of the Catholic elementary schools in

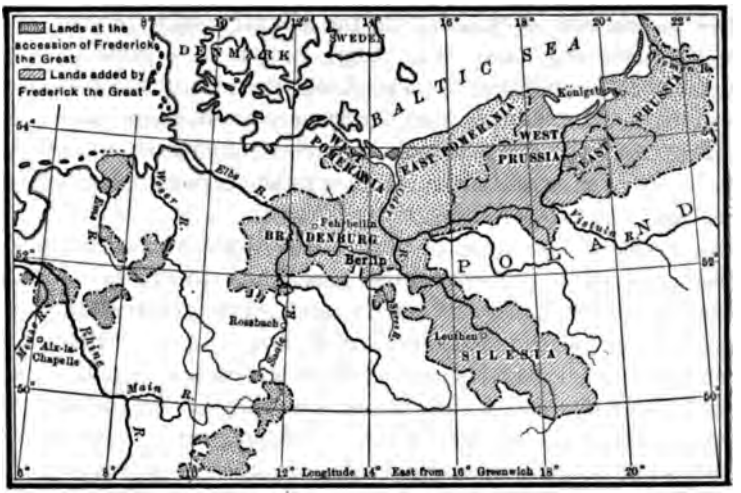


FIG. 169. THE KINGDOM OF PRUSSIA, 1740–86

the province of Silesia (**R. 275**). This was a new province which Frederick had wrested by force a few years previously (1748) from Maria Theresa of Austria, and the addition of a large number of Catholics to Prussia caused Frederick to issue specific regulations for schools among them.

These two School Codes did not so much bring already existing schools into a state system, but rather set up standards and obligations for an elementary-school system in part to be created in the future. The schools were still left under the supervision and direction of the Church, but the State now undertook to tell the Church what it must do. To enforce the obligation the State Inspectors of Prussia were directed to make an annual inspection (**R. 274, § 26**) of all schools, and to forward a report on their inspection to the Berlin Consistory, and for Catholic Silesia the following significant injunction was placed in the Code:

§ 51. In order to render as permanent as possible this reform of schools, which lies near our heart, we cannot be satisfied with committing the care of the schools to the clergy alone. We find it necessary that our bureau of War and Domain, the bureau of the Episcopal Vicariate, and the dioceses in our Silesian and Glatz districts, as well as our special school inspectors, give all due attention to this subject, so important to the State.

The Prussian School Codes of 1763 and 1765. The regulations of 1763 were issued, so the introduction reads (**R. 274**), because

"the instruction of youth" in the country had "come to be greatly neglected" and "the young people were growing up in stupidity and ignorance." The King, therefore, issued the new regulations "to the end that ignorance, so injurious and unbecoming to Christianity, may be prevented and lessened, and the coming time may train and educate in the schools more enlightened and virtuous subjects."

To this end the King ordered compulsory education for the children of all subjects from the ages of five to thirteen or fourteen, all apprentices to be taught, and leaving certificates to be issued on completion of the course (**R. 274, §§ 1–4**). The school hours were fixed, Sunday and summer instruction regulated, tuition fees standardized, and the fees of the children of the poor were ordered paid (**R. 274, §§ 5–8**). A school census, and fines on parents not sending their children to school were provided for (**R. 274, §§ 10–11**). The requirements for a teacher, his habits, his qualifications and examination, the license to teach, and the extent to which he might ply his trade or business, were all laid down in some detail (**R. 274 §§ 12–17**). The organization, instruction, textbooks, order of exercises, and discipline for all schools were prescribed at some length (**R. 274, §§ 19–21**). The Code closed with a series of regulations covering the relations of the schoolmaster and clergyman, and the supervision of the instruction by the clergyman and clerical superintendents (**R. 274, §§ 25–26**). Incapable teachers were ordered suspended or deposed. As a final injunction relative to school attendance the Code closed with the following sentence:

> In general we here confirm and renew all wholesome laws, published in former times, especially, that no clergyman shall admit to confirmation and the sacrament, any children not of his parish, nor those unable to read, or who are ignorant of the fundamental principles of evangelical religion.

The Code of 1765 for the Catholic schools of Silesia followed much the same line as the Code of 1763, though in it the King placed special emphasis on the training of schoolmasters, a subject in which he had become much interested (**R. 275 a**); the regulation of the conditions under which teachers lived and worked (**R. 275 b**); and the supervision of instruction by the clergyman of the parish (**R. 275 e**). These directions throw much light on *the conditions* surrounding teaching near the middle of the *eighteenth century*. The nature of instruction in the Catholic schools,

and the compulsion to attend, were also definitely stated (R. 275 c–d).

These new Codes met with resistance everywhere. The money for the execution of such a comprehensive project was not as yet generally available; parents and churches objected to taxation and to the loss of their children from work; the wealthy landlords objected to the financial burden; the standards for teachers later on (1779) had to be lowered, and veterans from Frederick's wars installed; and the examinations of teachers had to be made easy [1] to secure teachers at all for the schools. While there continued for some decades to be a vast difference between the actual conditions in the schools and the requirements of these Codes, and while the real establishment of a state school system awaited the first decade of the nineteenth century for its accomplishment, much valuable progress in organization nevertheless was made. In principle, at least, Frederick the Great, by the Codes of 1763 and 1765, effected for elementary education a transition from the church school of the Protestant Reformation, and for Catholic Silesia from the parish school of the Church, to the state school of the nineteenth century. It remained only for his successors to realize in practice what he had made substantial beginnings of in law. Nowhere else in Europe that early had such progress in educational organization been made.

The Prussian example followed in other German States. The example of Prussia was in time followed by the other larger German States. Würtemberg issued a new School Code in 1792, which remained the ruling law for the church schools throughout the eighteenth century. The Saxon King, Augustus the Just, inspired by the example of Frederick, issued a mandate, in 1766, reminding parents as to their duty to send children to school, and in 1773 issued a new Regulation, filled with "generous enthusiasm for the cause." A teachers' training-school was founded at Dresden, in 1788, and four others before the close of the century. In 1805 a comprehensive Code was issued. This required that every child must be able to read, write, count, and know the truths of religion to receive the sacrament; clergymen were ordered to supervise the schools; school attendance was re-

[1] "When the schoolmaster had to pass an examination before the clergyman of the place by order of the inspector, the local authorities, owing to the lamentable life of a schoolmaster, were glad to find persons at all who were willing to accept an engagement for such a position. In consequence an otherwise intolerable indulgence in examining and *employing* teachers took place, especially in districts where large *landholders had patriarchal sway.*" (Schmid, K. A., Encyclopädie, vol. VI, p. 287.)

quired from six to fourteen; the pay of teachers and the government appropriations for schools were increased; and a series of fines were imposed for violations of the Code. Bavaria issued new school Codes in 1770 and 1778, and additional schoolhouses were built and new textbooks written. After the suppression of the Jesuits (1773) a new progressive spirit animated the Catholic States, and Austria in particular, under the leadership of Maria Theresa and Joseph II (p. 475), made marked progress in school organization and educational reform.

In 1770 Maria Theresa appointed a School Commission to have charge of education in Lower Austria; in 1771 established the first Austrian normal school in Vienna; and in 1774 promulgated a General School Code (**R. 276**), drawn up by the Abbot Felbiger, who had been most prominent in school organization in Silesia. This Code provided for School Commissions in all provinces;[1] ordered the establishment of an elementary school in all villages and parishes, a "principal" or higher elementary school in the principal city of every canton, and a normal school in every province; laid down the course of study for each; and gave details as to teachers, instruction, compulsory attendance, support, and inspection similar to Frederick's Silesian Code (**R. 275**). Continuation instruction up to twenty years of age also was ordered. That such demands were much in advance of what was possible is evident, and it is not surprising that, in the reaction under Francis I, following the outburst of the French Revolution, we find a decree (1805) that the elementary school shall be curtailed to "absolutely necessary limits," and that

> the common people shall get in elementary school only such ideas as will not trouble them in their work, and which will not make them discontented with their condition; their intelligence shall be directed toward the fulfillment of their moral duties, and prudent and diligent fulfillment of their domestic and communal obligations.

The beginnings of teacher-training. The beginning of teacher-training in German lands was the *Seminarium Præceptorum* of Francke, established at Halle (p. 419), in 1697. In 1738 Johann Julius Hecker (1707–68), one of Francke's former students and teachers, and the author of the Prussian Code of 1763, established the first regular seminary for teachers in Prussia, to train intend-

[1] *Austria* at that time included not only the Austro-Hungarian Empire of 1914, *but extended* further into the German Empire and Italy, and included **Belgium and Luxemburg** as well.

ing theological students for the temporary or parallel occupation of teaching in the Latin schools. In 1747 he established a private *Lehrerseminar* in Berlin, in connection with his celebrated *Realschule* (p. 420), and there demonstrated the possibilities of teacher-training. Frederick the Great was so pleased with the result that, in 1753, he gave the school a subsidy and changed it into a royal institution, and on every fitting occasion recommended school authorities to it for teachers. Similar institutions were opened in Hanover, in 1751; Wolfenbüttel, in 1753; in the county of Glatz in Silesia, in 1764 (**R. 275**); in Breslau, in 1765 and 1767; and in Carlsruhe, in 1768. In the Silesian Code of 1765 Frederick specified (**R. 275 a**, § 2) six institutions which he had designated as teacher-training schools.

These early Prussian institutions laid the foundations upon which the normal-school system of the nineteenth century has been built. In Prussia first, but soon thereafter in other German States (Austria, at Vienna, 1771; Saxe-Weimar, at Eisenach, in 1783; and Saxony, at Dresden, 1788) the Teachers' Seminary was erected into an important institution of the State, and the idea has since been copied by almost all modern nations. This early development in Prussia was influential in both France and the United States, as we shall point out further on.

Despite these many important educational efforts, though, the type and the work of teachers remained low throughout the whole of the eighteenth century. In the rural and village schools the teachers continued to be deficient in number and lacking in preparation. Often the pastors had first to give to invalids, cripples, shoemakers, tailors, watchmen, and herdsmen the rudimentary knowledge they in turn imparted to the children. In the towns of fair size the conditions were not much better than in the villages. The elementary school of the middle-sized towns generally had but one class, common for boys and girls, and the magistrates did little to improve the condition of the schools or the teachers. In the larger cities, and even in Berlin, the number of elementary schools was insufficient, the schools were crowded, and many children had no opportunity to attend schools.[1] In Leipzig there was no public school until 1792, in which year the city free school was established. Even Sunday schools, supported by subscription, had been resorted to by Berlin, after 1798, to provide journeymen and apprentices with some of the rudiments

[1] *Bassewitz, M. Fr. von, Die Kurmark Brandenburg*, p. 342. (Leipzig, 1847.)



FIG. 170. A GERMAN LATE EIGHTEENTH-CENTURY SCHOOL
(After a picture in the German School Museum in Berlin)

of an education. The creation of a state school system out of the insufficient and inefficient religious schools proved a task of large dimensions, in Prussia as in other lands. Even as late as 1819 Dinter found discouraging conditions (**R. 279**) among the teachers of East Prussia.

Further late eighteenth-century progress. Frederick the Great died in 1786. In the reign of his successors his work bore fruit in a complete transfer of all schools from church to state control, and in the organization of the strongest system of state schools the world had ever known. The year following the death of Frederick the Great (1787), and largely as an outgrowth of the preceding centralizing work with reference to elementary education, the Superior School (*Oberschulcollegium*) Board was established to exercise a similar centralized control over the older secondary and higher schools of Prussia. Secondary and higher education were now severed from church control, in principle at least, as elementary education had been by the "Regulations" of 1763 and 1765. The year following (1788) "Leaving Examinations"

(*Maturitätsprüfung*) were instituted to determine the completion of the gymnasial course. These, for a time, were largely ineffective, due to clerical opposition, but the centralizing work of this Superior School Board for the supervision of higher education, and the state examinations for testing the instruction of the secondary schools, were from the first important contributing influences.

In 1794 came the culmination of all the preceding work in the publication of the General Civil Code (*Allgemeine Landrecht*) for the State, in which, in the section relating to schools, the following important declaration was made:

> Schools and universities are state institutions, charged with the instruction of youth in useful information and scientific knowledge. Such institutions may be founded only with the knowledge and consent of the State. All public schools and educational institutions are under the supervision of the State, and are at all times subject to its examination and inspection.

The secular authority and the clergy were still to share jointly in the control of the schools, but both according to rules laid down by the State. In all cases of conflict or dispute, the secular authority was to decide. This important document forms the *Magna Charta* for secular education in Prussia.

During the decade which followed the promulgation of this declaration of state control but little additional progress of importance was accomplished, though the Minister of Justice, to whom (1798) the administration of Lutheran church and school affairs had been given, maintained a correspondence for some years with the King regarding "provisions for a better education and instruction of the children of citizens and peasants," and stated to the King that "the object of reform is national education, and its field of operation, therefore, all provinces of the monarchy." The King, though, a weak, deeply religious, and unimaginative man (Frederick William III, 1797–1840), who lacked the energy and foresight of his predecessors, did little or nothing. Under Frederick William III the State lacked vigor and drifted; the Church regained something of its former power; and the army and the civil service became corrupt. In 1806 a blow fell which brought matters to an immediate crisis and forced important action.

II. A STATE SCHOOL SYSTEM AT LAST CREATED

The humiliation of Prussia. At the close of 1804 France, by vote, changed from the Republic to an Empire, with Napoleon Bonaparte as first Emperor of the French, and for some years he took pains that Frenchmen should forget "Liberty and Equality" amid the surfeit of "Glory" he heaped upon France. The great nations outside France, fearful of Napoleon's ambition and power, did not take his accession to the throne of France so complacently, and, in 1805, England, Sweden, Austria, and Russia formed the "Third Coalition" against Napoleon in an effort to restore the balance of power in Europe. Of the great powers of Europe only Prussia held aloof, refused to take sides, and in consequence enjoyed a temporary prosperity and freedom from invasion. For this, though, she was soon to pay a terrible price. Having humiliated the Austrians and vanquished the Russians, Napoleon now goaded the Prussians into attacking him, and then utterly humiliated them in turn. At the battle of Jena (October 14, 1806) the Prussian army was utterly routed, and forced back almost to the Russian frontier. Officered by old generals and political favorites who were no longer efficient, and backed by a state service honeycombed with inefficiency and corruption, the Prussian army that had won such victories under Frederick the Great was all but annihilated by the new and efficient fighting machine created by the Corsican who now controlled the destinies of France. By the Treaty of Tilsit (July 7, 1807) Prussia lost all her lands west of the Elbe and nearly all her stealings from Poland — in all about one half her territory and population — and was almost stricken from the list of important powers in Europe. In all its history Prussia had experienced no such humiliation as this. In a few months the constructive work of a century had been undone.

The regeneration of Prussia. The new national German feeling, which had been slowly rising for half a century, now burst forth and soon worked a regeneration of the State. In the school of adversity the King and the people learned much, and the task of national reorganization was entrusted to a series of able ministers whom the King and his capable Queen, Louise, now called into service. His chief minister, Stein, created a free people by *abolishing* serfdom and feudal land tenure (1807); eliminated *feudal distinctions* in business, granted local government to the

cities; and broke the hold of the clergy on the educational system. His successor, Hardenburg, extended the rights of citizenship, and laid the foundations of government by legislative assemblies. Another minister, Scharnhorst, reorganized the Prussian army (1807–13) by dismissing nearly all the old generals, and introducing the principle of compulsory military service. In all branches of the government service there were reorganizations, the one thought of the leaders being to so reorganize and revitalize the State as to enable it in time to overthrow the rule of Napoleon and regain its national independence.

Though the abolition of serfdom, the reform of the civil service, and the beginnings of local and representative government were important gains, nothing was of secondary importance to the complete reorganization of education which now took place. The education of the people was turned to in earnest for the regeneration of the national spirit, and education was, in a decade, made the great constructive agent of the State. Said the King:

> Though we have lost many square miles of land, though the country has been robbed of its external power and splendor, yet we shall and will gain in intrinsic power and splendor, and therefore it is my earnest wish that the greatest attention be paid to public instruction. . . . The State must regain in mental force what it has lost in physical force.

His minister Stein said:

> We proceed from the fundamental principle, to elevate the moral, religious, and patriotic spirit in the nation, to instil into it again courage, self-reliance, and readiness to sacrifice everything for national honor and for independence from the foreigner. . . . To attain this end, we must mainly rely on the education and instruction of the young. If by a method founded on the true nature of man, every faculty of the mind can be developed, every noble principle of life be animated and nourished, all one-sided education avoided, and those tendencies on which the power and dignity of men rest, hitherto neglected with the greatest indifference, carefully fostered — then we may hope to see grow up a generation, physically and morally vigorous, and the beginnings of a better time.

Fichte appeals to the leaders. Still more did the philosopher Fichte (1762–1814), in a series of "Addresses to the German Nation," delivered in Berlin during the winter [1] of 1807–08, appeal to the leaders to turn to education to rescue the State from the miseries which had overwhelmed it. Unable forcibly to resist,

[1] These lectures were listened to by Napoleon's police and passed to print by his censor, *not being regarded* as containing anything seditious or dangerous.

and with every phase of the government determined by a foreign conqueror, only education had been overlooked, he said, and to this the leaders should turn for national redemption (R. 277). He held that it rested with them to determine

whether you will be the end and last of a race . . . or the beginnings and germ of a new time, glorious beyond all your imaginings, and those from whom posterity will reckon the years of their welfare. . . . A nation that is capable, if it were only in its highest representation and leaders, of fixing its eyes firmly on the vision from the spiritual world, Independence, and being possessed with a love of it, will surely prevail over a nation that is only used as a tool of foreign aggressiveness and for the subjugation of independent nations.

With a fervor of emotion that was characteristic of a romantic age, impelled by a conviction that the distinctive character of the German people was indispensable to the world, and holding that what was necessary also was possible, Fichte made the German leaders feel, with him, that

to reshape reality by means of ideas is the business of man, his proper earthly task; and nothing can be impossible to a will confident of itself and of its aim.[1]

Fichte's Addresses stirred the thinkers among the German people as they had not been stirred since the days of the Reformation,[2] and a national reorganization of education, with national ends in view, now took place. As Duke Ernest remade Gotha, after the ravages of the Thirty Years' War, by means of education (p. 317), so the leaders of Prussia now created a new national spirit by taking over the school from the Church and forging it into one of the greatest constructive instruments of the State. The result showed itself in the "Uprising of Prussia," in the winter of 1812–13; the "War of Liberation," of 1813–15; the utter defeat of Napoleon at the battle of Leipzig by Russia, Prussia, and Austria, in 1813; and again at the battle of Waterloo by Eng-

[1] "He set all his hopes for Germany on a new national system of education. One German State was to lead the way in establishing it, making use of the same right of coercion to which it resorted in compelling its subjects to serve in the army, and for the exercise of which certainly no better justification could be found than the common good aimed at in national education." (Paulsen, Fr., *German Education, Past and Present*, p. 240.)

[2] "Never have the souls of men been so deeply stirred by the idea of raising the whole existence of mankind to a higher level. Something like the enthusiasm which had taken hold of the minds at the outbreak of the French Revolution was again at work, the only difference being that the strong current of national feeling directed *it toward* an aim which, if more limited, was, for that very reason, more practicable *and more* defined." (Paulsen, Fr., German Education, Past and Present, p. 183.)



JOHANN GOTTLIEB FICHTE (1762–1814)
Philosopher, university teacher



WILHELM VON HUMBOLDT (1767–1835)
Philosopher, scholar, statesman

PLATE 13. TWO LEADERS IN THE REGENERATION OF PRUSSIA

land and Prussia,[1] in 1815. Still more clearly was the result shown in the humiliating defeat of France, in 1870, when it was commonly remarked that the schoolmaster of Prussia had at last triumphed. The regeneration of Prussia in the early part of the nineteenth century, as well as its more recent humiliation, stand as eloquent testimonials to the tremendous influence of education on national destiny, when rightly and when wrongly directed.

The reorganization of elementary education. The first step in the process of educational reorganization was the abolition (1807) of the *Oberschulcollegium* Board, established (p. 564) in 1787 to supervise secondary and higher education, in order to get rid of clerical influence and control. The next step was the creation instead (1808) of a Department of Public Instruction, organized as a branch of the Interior Department of the State.

One of the first steps of the acting head of the new department was to send seventeen Prussian teachers (1808) to Switzerland to spend three years, at the expense of the Government, in studying Pestalozzi's ideas and methods, and they were particularly enjoined that they were not sent primarily to get the mechanical side of the method, but to

> warm yourselves at the sacred fire which burns in the heart of this man, so full of strength and love, whose work has remained so far below what he originally desired, below the essential ideas of his life, of which the method is only a feeble product.
>
> You will have reached perfection when you have clearly seen that education is an art, and the most sublime and holy of all, and in what connection it is with the great art of the education of nations.

In 1809 Carl August Zeller (1774–1847), a pupil of Pestalozzi, who had established two Pestalozzian training-colleges in Switzerland and had just begun to hold Pestalozzian institutes in Würtemberg (p. 545), was called to Prussia to organize a Teachers' Seminary (normal school) to train teachers in the Pestalozzian methods. The seventeen Prussian teachers, on their return from study with Pestalozzi, were also made directors of training institutions, or provincial superintendents of instruction. In this way Pestalozzian ideas were soon in use in the elementary school rooms of Prussia, and so effective was this work, and so readily did the Prussian teachers catch the spirit of Pestalozzi's endeav-

[1] As a result of the overthrow of Napoleon, the Congress of Vienna restored to Prussia and France substantially the boundaries they had at the opening of the Napoleonic Wars. Still more important for the future was the consolidation of some four hundred States and petty German kingdoms into thirty-eight States.

ors, that at the Berlin celebration of the centennial of his birth, in 1846, the German educator Diesterweg [1] said:

By these men and these means, men trained in the Institution at Yverdon under Pestalozzi, the study of his publications, and the applications of his methods in the model and normal schools of Prussia, after 1808, was the present Prussian, or rather Prussian-Pestalozzian school system established, for he is entitled to at least one half the fame of the German popular schools.



FIG. 171. DINTER (1760–1831) Director of Teachers' Seminaries in Saxony; Superintendent of Education in East Prussia.

Similarly Gustavus Friedrich Dinter, who early distinguished himself as principal of a Teachers' Seminary in Saxony, was called to Prussia and made School Counselor (Superintendent) for the province of East Prussia. Wherever Prussia could find men, in other States, who knew Pestalozzian methods and possessed the new conception of education, they were called to Prussia and put to work, and the statement of Dinter was characteristic of the spirit which animated their work. He said: [2]

I promised God, that I would look upon every Prussian peasant child as a being who could complain of me before God, if I did not provide him with the best education, as a man and a Christian, which it was possible for me to provide.

Work of the Teachers' Seminaries. Napoleon had imposed heavy financial indemnities on Prussia, as well as loss of territory, and the material means with which to establish schools were scanty indeed. With a keen conception of the practical difficulties, the leaders saw that the key to the problem lay in the creation of a new type of teaching force, and to this end they began from the first to establish Teachers' Seminaries. Those who desired to enter these institutions were carefully selected, and out of them a steady stream of what Horace Mann described (**R. 278**) as a "beneficent order of men" were sent to the schools, "mould-

[1] Friedrich Adolph Wilhelm Diesterweg became a pupil in one of the earliest normal schools in Prussia, that at Frankfort; then a teacher; and in 1820 became a director of a Teachers' Seminary at Moers. From 1833 to 1849 he was head of the normal school at Berlin. He has often been called "der deutsche Pestalozzi."

[2] Made in a letter to Baron von Altenstein, Prussian Minister for Education.

ing the character of the people, and carrying them forward in a career of civilization more rapidly than any other people in the world are now advancing." Mann described, with marked approval, both the teacher and the training he received.

So successful were these institutions that within a decade, under the glow of the new national spirit animating the people, the elementary schools were largely transformed in spirit and purpose, and the position of the elementary-school teacher was elevated from the rank of a trade (R. 279) to that of a profession (R. 278). By 1840, when the earlier fervor had died out and a reaction had clearly set in, there were in Prussia alone thirty-eight Teachers' Seminaries for elementary teachers, approximately thirty thousand elementary schools, and every sixth person in Prussia was in school. In the other German States, and in Holland, Sweden, and France, analogous but less extensive progress in providing normal schools and elementary schools had been made; but in Austria, which did not for long follow the Prussian example, the schools remained largely stationary for more than half a century to come.



FIG. 172. DIESTERWEG (1790–1866)
Director of Teachers' Seminaries at Maurs (1820–33) and Berlin (1833–49). "Der deutsche Pestalozzi"

Nationalizing the elementary instruction. That the system of elementary vernacular or people's schools (the term *Volksschule* now began to be applied) now created should be permeated by a strong nationalistic tone was, the times and circumstances considered, only natural. Though the Pestalozzian theories as to the development of the mental faculties, training through the senses, and the power of education to regenerate society were accepted, along with the new Pestalozzian subject-matter and methods in instruction (p. 543,) all that could be rendered useful to the Prussian State in its extremity naturally was given special emphasis. Thus all that related to the home country — geography, history, and the German speech — was taught as much from the patriotic as from the pedagogical point of view. Music was given special emphasis as preparatory for participation in the

patriotic singing-societies and festivals, which were organized at the time of the "Uprising of Prussia" (1813). Drawing and arithmetic were emphasized for their practical values. Physical exercises were given an emphasis before unknown, because of their hygienic and military values. Finally religion was given an importance beyond that of Pestalozzi's school, but with the emphasis now placed on moral earnestness, humility, self-sacrifice, and obedience to authority, rather than the earlier stress on the Catechism and church doctrine.

Clearly perceiving, decades ahead of other nations, the power of such training to nationalize a people and thus strengthen the State, the Prussian leaders, in the first two decades of the nineteenth century, laid the foundations of that training of the masses, and of teachers for the masses (**R. 280**), which, more than any other single item, paved the way for the development of a national German spirit, the unification of German lands into an Imperial German Empire, and that blind trust in and obedience to authority which has recently led to a second national humiliation.

The reorganization of secondary education. Alongside this elementary-school system for the masses of the people, the older secondary and higher school system for a directing class (p. 553) also was largely reorganized and redirected. The first step in this direction was the appointment, in 1809, of Wilhelm von Humboldt (1767–1835), "a philosopher, scholar, philologist, and statesman" of the first rank, to the headship of the new Prussian Department of Public Instruction. During the two and a half years he remained in charge important work in the reorganization of secondary and higher education was accomplished. In 1817 the Department of Public Instruction was changed from a bureau to an independent Ministry for Spiritual and Instructional Affairs. By 1825, when governing school boards were ordered established in each province, and made responsible to the Ministry for Education at Berlin, the organization of the state school system was virtually complete. For the next half-century the changes made were in the nature of the perfection of bureaucratic organization, rather than any fundamental organizing change. During the early years improvements of great future importance for secondary education were effected in the creation of a well-educated, professional teaching body, and in the standardization of courses and of work.

In 1810 the examination of all secondary-school teachers, ac-

cording to a uniform state plan, was ordered. The examinations were to be conducted for the State by the university authorities; to be based on university training in the gymnasial subjects, with an opportunity to reveal special preparation in any subject or subjects; and no one in the future could even be nominated for a position as a gymnasial teacher who had not passed this examination. This meant the erection of the work of teaching in the secondary schools into a distinct profession; the elimination from the schools of the theological student who taught for a time as a stepping-stone to a church living; and the end of easy local examination and approval by town authorities or the patrons of a school. To insure still better preparation of candidates, Pedagogical Seminars were begun in the universities [1] for imparting to future gymnasial teachers some pedagogical knowledge and insight, while Philological Seminars also appeared, about the same time,[2] to give additional training in understanding the spirit of instruction in the chief subjects of the gymnasial course — the classics. In 1826 a year of trial teaching before appointment (*Probejahr*) was added for all candidates, and in 1831 new and more stringent regulations for the examination of teachers were ordered.[3] At least two generations ahead of other nations, Prussia thus developed a body of professional teachers for its secondary schools.

Unification of the secondary schools. In 1812 the Leaving Examinations (*Maturitätsprüfung*), instituted in 1788, but ineffective through clerical opposition, were revived and strictly enforced. In 1834 the passing of such an examination was made necessary to entering nearly all branches of the state civil service, thus securing an educated body of minor public officials. This same year the universities gave up their entrance examinations, and have since depended entirely on the Leaving Examinations of the State.

[1] "Herbart's seminar at the university of Königsberg was officially recognized, in 1810; Gedike's seminar in Berlin was formally taken over by the university, in 1812; the seminar in Stettin, founded in 1804, was reorganized in 1816; Breslau began pedagogical work, in 1813; and in 1817 it was stated that the purpose of the reorganized seminar in Halle was 'the training of skilled teachers for the *Gymnasien*.'" (Russell, James E., *German Higher Schools*, p. 97.)

[2] Gesner at Göttingen and Wolff at Halle laid down the lines for these in the middle eighteenth century. The early nineteenth-century foundations were at Königsberg, 1810; Berlin, 1812; Breslau, 1812; Bonn, 1819; Griefswald, 1820; and Münster, 1825.

[3] All prospective gymnasial teachers, whether graduates of the universities or not, were now required to take examinations in philosophy, pedagogy, theology, and the main gymnasial subjects, showing marked proficiency in one of the following groups, and a reasonable knowledge of the other two: namely, (1) Greek, Latin, German; (2) Mathematics and the Natural Sciences; (3) History and Geography.

The immediate effect of the reinstitution of the Leaving Examinations was to unify the work of all the different surviving types of classical secondary schools — *Gymnasium*, *Lyceum*, *Pädagogium*, *Collegium*, *Lateinische Schule*, *Akademie* — all standard nine-year schools henceforth taking the name of *Gymnasien*. Those institutions which could not meet the standards of a nine-year classical school were either permitted to do the first six years of the work, being known as *Pro-Gymnasien*, or the modern languages were substituted for the ancient, and they became middle-class institutions under the name of *Bürgerschulen*. A few *Realschulen* also were in existence, and these were permitted to continue, as middle-class institutions, but without any state recognition. Thus, without the destruction of institutions, the accumulated foundations of the centuries were transformed into a series of organized state schools to serve the needs of the State.

The next step was the promulgation of a uniform course of instruction for all *Gymnasien* and *Pro-Gymnasien*. This was done in 1816. The studies were Latin, Greek, German, mathematics, history, geography, religion, and science, the amount of time to be devoted to each ranging, in the order listed, from a maximum for Latin to a minimum for science. Up to 1824 Greek was not absolutely required; from 1824 to 1837 it was required, unless the substitution of a modern language was permitted; but after 1837, when the type of German secondary school had become fairly well fixed, and the devotion to humanistic studies had reached a climax, Greek became a fixed and unvarying requirement.[1]

Founding of the University of Berlin. One result of the Treaty of Tilsit (p. 566) was that Prussia had lost all her universities, except three along the Baltic coast. Both Halle and Göttingen were lost, and the loss of Halle was a severe blow. In 1807 Fichte, who had been a professor at Jena, drew up a plan and submitted it to the King for the organization of a new university at Berlin. When Humboldt came to the head of the Department of Public Instruction the idea at once won his enthusiastic approval. In May, 1809, he reported favorably on the project to the King, and three months later a Cabinet Order was issued creating the new university, giving it an annual money grant, and assigning a royal palace to it for a home. The spirit with which the new institution was founded may be inferred from the following extract

[1] *See* Russell, Jas. E., *German Higher Schools*, p. 101, for the detailed "*Gymnasial Program*" promulgated in 1837.

from a memorial, published by Humboldt, in 1810. In this he said:

> The State should not treat the universities as if they were higher classical schools or schools of special sciences. On the whole the State should not look to them at all for anything that directly concerns its own interests, but should rather cherish a conviction that, in fulfilling their real destination, they will not only serve its own purposes, but serve them on an infinitely higher plane, commanding a much wider field of operation, and affording room to set in motion much more efficient springs and forces than are at the disposal of the State itself.

This university was indeed a new creation, and of far more significance for the future of university work than even the founding of Halle had been. To the selection of its first faculty Humboldt devoted almost all his energies during the period he remained in office. From the first, high attainment in some branch of knowledge, and the ability to advance that knowledge, was placed ahead of mere teaching skill. The most eminent scholars in all lines were invited to the new "chairs," and when it opened (1810) its first faculty represented the highest attainment of scholarship in German lands. From the first the instruction divested itself of almost all that characterized the school. The lecture replaced the classroom recitation, and the seminar, in which small groups of advanced students investigate a problem under the direction of a professor, was given a place of large importance in the institution. Original research and contributions to knowledge marked the work of both students and professors, the object being, not to train teachers for the schools, but to produce scholars capable of advancing knowledge by personal research. Even more than at Halle, the institution was a place where professors and students worked to discover truth, uninfluenced by any preconceived notions and unmindful of what older ideas might be upset in the process. The value of such pioneer work for university scholars everywhere is not likely to be overestimated.

Specialization in university instruction emphasized. Specialization in some field of knowledge soon came to be the ruling idea, and this proved exceedingly fruitful in the years which followed. There Bopp developed the study of comparative grammar on the basis of the Sanskrit. There Dietz founded Romance philology. Ritschl turned his students to the study of Latin inscriptions to reconstruct the past. Lepsius began the study of Egyptology with a spade. Niebuhr's *Roman History* (1811) was the institution's *first fruit, and his* successor, Ranke, showed his students

how to study history from the sources. Hegel, Schopenhauer, and Lotze made over philosophy. Fechner and Wundt began there the study of experimental psychology. Stahl and von Savigny created new standards in the study of law. Müller introduced the microscope into the study of pathological anatomy. Schultze systematized zoölogy. Liebig, who had opened at Giessen (1824) what was probably the first chemical laboratory in the world open to students, was drawn to Berlin and created there a new chemistry. Still later, Helmholtz created there a new physics.

The effect of all this on the expansion of the work of the philosophical faculty was marked. The new philological and historical sciences, the biological sciences, and the mathematical sciences, were all greatly expanded in scope, and the new philosophical faculty, evolved out of the old arts faculty (p. 554), now attained to the place of first importance in the university — a position it has ever since retained. Law and medicine were also given a new direction and emphasis, and even the teaching of theology was greatly improved under the specialization in instruction and the freedom in teaching which now became the rule.

The effect on the other German universities was marked. Some of the older institutions (Erfurt, Wittenberg, Cologne, Mainz) died out, while new foundations (Breslau, 1811; Bonn, 1818; Munich, 1826) after the new model, took their place. Those that continued were changed in character,[1] and a new unity was established throughout the German university world. By 1850 exact scientific research, in both libraries and laboratories, and a sober search for truth, had become the watchword of all the German universities. In consequence they naturally assumed a world leadership, and were frequented by students from many lands. Especially has the United States been influenced in its university development by the large number of university teachers who received their specialized training in the German universities [2] during the latter half of the nineteenth century. The lec-

[1] In 1840 there were six Prussian universities; by 1900 the number had increased to eleven, and three technical universities in addition. In the other German States eleven additional universities and six technical universities were in existence, in 1900.

[2] Benjamin Franklin visited Göttingen, as early as 1766, but the first American student to take a degree at a German university was Benjamin S. Barton, of Philadelphia, who took his doctor's degree at Göttingen, in 1799. By 1825 ten American students had studied one or more semesters at Göttingen. That year the first American student registered at Berlin, and in 1827 the first at Leipzig. (See Hinsdale, B. A., in *Report, U.S. Commissioner of Education*, 1897–98, vol. 1, pp. 603–614.)

ture, the seminar, laboratory investigation, research, the doctorate, and academic freedom in study and teaching are distinctive contributions to our university development drawn from German lands, and superimposed on our earlier English-type college. The founding of Johns Hopkins University, at Baltimore, in 1876, on the German model, marked the erection of the first distinctively research university in America.

A two-class state school system created. We thus see that Prussia by 1815, clearly by 1825, had taken over education from the Church and made of it an instrument of the State to serve State ends. For the masses there was the *Volksschule*, superseding the old religious vernacular school and clearly designed to create an intelligent but obedient and patriotic citizenship for the Fatherland, and in this school the great majority of the children of the State received their education for citizenship and for life. This was for both sexes, and was entirely a German school. Attendance upon this school was made compulsory, and beyond this some continuation education early began to be provided (**Rs. 274, § 6; 275 d; 276, § 15**). Within the past half-century continuation education, especially along vocational lines, as we shall point out in a subsequent chapter, has received in German lands a very remarkable development. To insure that this school should serve the State in the way desired, Teachers' Seminaries, for the training of *Volksschule* teachers, were from the first made a feature of the new state system.

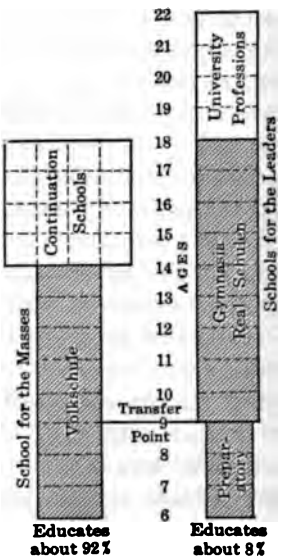


FIG. 173. THE PRUSSIAN STATE SCHOOL SYSTEM CREATED

Compare with Fig. 209 and note the difference between a European two-class school system and the American democratic educational ladder.

For those who were to form the official and directing class of society — a closely limited, almost entirely male, intellectual aristocracy — education in separate classical schools, with university or professional training superimposed, was provided, and this type of training offered a very thorough preparation for a small *and a carefully* selected class. Out of this class the leaders

of Germany for a century have been drawn.[1] For this classical school also the universities were early directed to prepare a well-educated body of teachers. The Prussian plan was followed in all its essentials in the other German States, so that the drawing given (Fig. 173) was true for Germany as a whole, as well as for Prussia, up at least to 1914.

New nineteenth-century tendencies manifested. In this early evolution of the Prussian state school systems we find two prominent nineteenth-century ideas expressing themselves. The first is the new conception of the State as not merely a government organized to secure national safety and protection from invasion, but rather an organization of the people to promote public welfare and realize a moral and political ideal. To this end state control of the whole range of education, to enable the State to promote intellectual and moral and social progress along lines useful to the State, became a necessity, and some form of this education, in the interests of the public welfare, must now be extended to all. Though France and the new American nation gave earlier political expression to this new conception of the State, it was in Prussia that the idea attained its earliest concrete and for long its most complete realization. Seeing further and more clearly than other nations the possibilities of education, the practical workers of Prussia, and after them the other German States, took over education as a function of the State for the propagation of the national ideas and the promotion of the national culture. Of this development Paulsen says:

> In the nineteenth century Germany took the lead in the educational movement among the nations of Europe. The German universities have become acknowledged centers of scientific research for the whole world. . . . In the domain of primary and technical education Germany has also become the universal teacher of Europe.
>
> But it must not be forgotten, in this connection, that the German people had been the pupils of their neighbors during a greater length of time and with greater assiduity than any other European nation. Thus, in the fifteenth and sixteenth centuries, Germany imported the culture of Humanism from Italy. During the seventeenth and eighteenth centuries she introduced the modern courtly culture and language of the French people, besides giving admission, since the middle

[1] The remark attributed to Bismarck is interesting in this connection. "Of the students who attend the German universities," he said, "one-third die prematurely as the result of disease arising from too great poverty and under-nourishment while students; another one-third die prematurely or amount to little due to bad habits and drinking and disease contracted while students; the remaining third rule Europe."

of the eighteenth century, to the philosophy, science, and literature of English middle-class society. Lastly, since the end of the eighteenth century, the Germans have yielded themselves to the influence of the Hellenic spirit with greater fervor than any other nation.

The second nineteenth-century idea which early found expression in the Prussian State, and one which became a dominant factor during the latter half of the century, was the idea of utilizing the schools, as state institutions, to promote national ends — to unify and nationalize peoples. National self-consciousness here first found concrete expression, and with wonderful practical results. From a geographical expression, consisting of nearly four hundred petty self-governing cities, principalities, and states, and some fourteen hundred independent noblemen and prelates, before the Napoleonic wars, their close found the German people free from serfdom, united in spirit, and organized politically into thirty-eight modern-type States. In 1870, largely as a result of the nationalizing efforts of government and education, working hand in hand, an Imperial Empire of twenty-two States and three Free Cities was formed. The struggle for national realization, begun by Prussia after 1807, and with education as the important constructive tool of the State, has since been copied by nation after nation and has become the dominant force of modern history. To awaken a national self-consciousness, to acquire national unity, and to infuse into all a common culture has supplanted the humanistic cosmopolitanism of the eighteenth century and become the dominant characteristic of nineteenth-century political history. In this Prussia led the way.

The period of reaction. Through the period preceding the Wars of Liberation (1813–15), and afterward for a few years, an educational zeal animated the Government. The schools during this period were free on the one hand from politics and on the other from minute official regulation. As one writer well stated: [1]

> It was difficult to decide whether the schools derived their importance from the life which surged around them, or whether their importance was due to their intrinsic power, very carefully fostered by the state authorities. . . . There was spirit and life in Prussia; there was much activity and liberty in contriving, with little outward parade. Any foreigner, visiting Prussia, might observe that the vitalizing breath of government, like the spirit of God, was acting upon the whole people.

[1] Barnard, Henry, *American Journal of Education*, vol. xx, p. 365.

Napoleon was finally vanquished at Waterloo (1815) and sent to Saint Helena, and the Congress of Vienna (1815) remade the map of Europe. In doing so it forgot that the people wanted constitutional government, instead of a return to absolute rulers. It restored old thrones, rights, and territories, and inaugurated a policy of political reaction which increased in intensity with time and dominated the governments of continental Europe until after the middle of the century. Under the lead of the Austrian minister, Metternich, and by "third-degree" methods, the so-called Holy Alliance [1] of continental Europe suppressed free speech, democratic movements, political liberties, university freedom, and liberalism in government and religion. The governments in this Alliance redirected and restricted the people's schools, as much as could be done, to make them conform in purpose to their reactionary ideas. In consequence, the development of popular education in Germany, as well as in France and other continental lands, was for a time checked. The great start obtained by Prussia and the German States before 1820, though, was such that what had been done there could not be wholly undone. In France, Spain, the Italian Kingdoms, the Austrian States, and Russia, on the other hand, what had not been developed to any extent could be prevented from developing, and in these lands popular education was given back to the Church to control and direct. In England, also, though for other reasons there, the Church retained its control over elementary education for half a century longer.

Change in the spirit of the schools. The King of Prussia, Frederick William III (1797–1840), though he had given full adherence to the movement for general education during the dark period of Prussian history, was after all never fully in sympathy with the liberal aspect of the movement. After Austria, by the settlement at Vienna, became the leader of the German States, and Metternich the dominating political personality of Europe, the King came more and more to favor a restriction of liberties and the holding of education to certain rather limited lines, fearful that too much education of the people might prove harmful to the Government. Accordingly, under the influence of the King and

[1] This was proposed by Czar Alexander I of Russia in 1815, and became a personal alliance of the Czar of Russia, the Emperor of Austria, and the King of Prussia, "to promote religion, peace, and order." Other princes were asked to join *this continental* League to enforce peace and, under the rule of Prince Metternich, *chief minister* of Austria, it dominated Europe until after the political revolutions *of 1848.*

against the desires of the liberal leaders, Prussia now changed direction and embarked on a policy of reaction which checked normal educational progress; led to the unsuccessful revolution of 1848 and the subsequent almost fanatical governmental opposition to reforms; and was in large part responsible for the disaster of 1918. It is an interesting speculation as to how different the future German and world history might have been had Prussia and the German States held to the liberal ideas of the earlier period, and drawn their political conceptions from England and the new American nation, rather than from Austria and Russia.

Accordingly, in November, 1817, the Department of Public Instruction was replaced by a Ministry for Spiritual, Educational, and Medical Affairs, and Karl, Baron von Altenstein, was made Minister. He continued in office until his death,[1] in 1840, and his administration was marked by an increasing state centralization and limitation of the earlier plans. In 1819 he codified all previous practices into a general school law for the kingdom. While the King never really approved and issued it, it nevertheless became a basis for future work and is the law so enthusiastically described by Cousin, in 1830 (**R. 280**). Under his administration the earlier creative enthusiasm and the energy for the execution of great ideas disappeared, and the earlier "stimulating and encouraging attitude on the part of the authorities was now replaced by the timid policy of the drag and the brake." The earlier preparatory work in the development of Teachers' Seminaries and the establishment of elementary schools was allowed to continue; Pestalozzian ideas were for a time not seriously restricted; compulsory attendance was more definitely ordered enforced, in 1825; the abolition of tuition fees for *Volksschule* education was begun in 1833, but not completed until 1888; and a more careful supervision of schools was instituted, in 1834. The great change was rather in the spirit and direction of the instruction. The early tendency to emphasize nationalism and religious instruction (p. 571) was now stressed, and the liberal aspects of Pestalozzianism were increasingly subordinated to the more formal instruction and to nationalistic ends. The soldier and the priest joined hands in diverting the schools to the

[1] As a young man Altenstein had been in charge of a subordinate division of the Department of Public Instruction under Humboldt, and was a man of somewhat liberal ideas. Now he was compelled to fall in with the ideas of the political leaders and the wishes of the king, though he still did something to hold back the reactionary forces and preserve much of what had been gained.

creation of intelligent, devout, patriotic, and, above all else, obedient Germans, while the universal military idea, brought in by the successful work of Scharnhorst (p. 567), and retained after the War of Liberation as a survival of the old dynastic and predatory conception of the State, was more and more emphasized in the work of the schools and the life of the citizen. When Horace Mann reported on his visit to the schools of the German States, in 1843, he called attention to this element of weakness (**R. 281**), as well as to their many elements of strength.

Further intolerance and reaction. The reactionary tendencies which set in after the settlement of Vienna had, by 1840, produced stagnation in the life of the Governments of Europe, and the revolutions of 1848, which broke out in France, Italy, Switzerland, and the different German and Austrian States, were revolts against the reactionary governmental rule and an expression of disappointment at the failure to secure constitutional government. The revolutions were both successful and unsuccessful — successful in that the greater liberty they sought came later on, but unsuccessful at the time. In consequence, immediately following 1848, an even more reactionary educational policy was instituted. University freedom was markedly restricted; the institutions lost their earlier vigor; and the number of students suffered a marked decline in consequence. The secondary schools also felt the new influences. Latin and Greek were made compulsory; uniform programs for work were insisted upon; and Latin in particular was reduced to a grammatical drill that destroyed the spirit of the earlier instruction and put gymnasial teaching back almost to the type made so popular by Sturm. The few *Realschulen*, which had continued to exist and were tolerated before, were now treated with positive dislike. In 1859 they were able to force their first official recognition, but only when changed from practical schools for the middle classes to secondary schools, on the same basis as the *Gymnasien*, and for parallel ends.

It was upon the elementary schools (*Volksschulen*) and the Teachers' Seminaries that the most severe official displeasure now fell. A number of *Volksschule* teachers had been connected with the revolutions of 1848, and "over-education" was regarded as responsible. The Teachers' Seminary at Preslau, which had for long given a high grade of training, was closed, and the head of the Seminary at Berlin, Diesterweg, was dismissed because of his

strong advocacy of Pestalozzian ideas. Anything savoring of individualism was especially under the ban. Bitter reproaches were heaped upon the elementary-school teachers, and the new King, Frederick William IV (1840–61) considered their work as the very root of the political evils of the State. To a conference of Seminary teachers, held in 1849 in Berlin, he said: [1]

You and you alone are to blame for all the misery which the last year has brought upon Prussia!' The irreligious pseudo-education of the masses is to be blamed for it, which you have been spreading under the name of true wisdom, and by which you have eradicated religious belief and loyalty from the hearts of my subjects and alienated their affections from my person. This sham education, strutting about like a peacock, has always been odious to me. I hated it already from the bottom of my soul before I came to the throne, and, since my accession, I have done everything I could to suppress it. I mean to proceed on this path, without taking heed of any one, and, indeed, no power on earth shall divert me from it.

Thus easily did an autocratic Hohenzollern cast upon the shoulders of others the burden of his own failure to grasp the evolution in political thinking [2] which had taken place in Europe, since 1789. Unfortunately for the future of the German people he was able to force his will upon them.

In 1854 new "Regulations" were issued which put the course of instruction for elementary schools back to the days of Frederick the Great. The one-class rural elementary school was made the standard. Everything beyond reading, writing, a little arithmetic, and religious instruction in strict accordance with the creeds of the Church, was considered as superfluous, and was to be allowed only by special permit. The elimination of illiteracy,

PROGRESS OF ELEMENTARY EDUCATION AS SHOWN BY THE DECREASE IN ILLITERACY IN PRUSSIA, BY PROVINCES

(From *Rep. U.S. Com. Educ.*, 1899–1900, I, p. 781)

Provinces	1841	1864–65	1881	1894–95
	Per cent.	*Per cent.*	*Per cent.*	*Per cent.*
East Prussia	15.33	16.54	7.05	0.99
West Prussia			8.79	1.23
Brandenburg	2.47	.96	.32	.06
Pomerania	1.23	1.47	.43	.12
Posen	41.00	16.90	9.97	.98
Silesia	9.22	3.78	2.33	.43
Saxony	1.19	.49	.28	.09
Westphalia	2.14	1.03	.60	.02
Rhenish Prussia	7.06	1.13	.23	.05
Hohenzollern		.00	.00	.00
The State	9.30	5.52	2.38	.33

[1] Paulsen, Fr., *German Education, Past and Present*, p. 246.

[2] It was this same Frederick William IV who had for a time refused to grant constitutional government to Prussia, saying: "No written sheet of paper shall ever thrust itself like a second providence between the Lord God in heaven and this land." In 1850, however, he was forced to grant a limited form of constitutional government to his people.

the creation of obedient citizens, and the nationalizing of new elements became the aim of the schools.

The instruction in the Teachers' Seminaries was reduced to the merest necessities, and they were given clearly to understand that they were to train teachers, and not to prepare educated men. All theory of education, all didactics, all psychology were eliminated. A return was made to the subject-matter theory of education, and a limited subject-matter at that, and it once more became the business of the teacher to see that this was carefully learned. Religious instruction naturally once more came to hold a place of first importance. Similar reactionary movements took place in other German States, all being sensitive to the reactionary spirit of the time and the leadership of Austria and Prussia.

The modern German educational purpose. After about 1860, largely in response to modern scientific and industrial forces among a people turning from agriculture toward industrialism, a slight relaxation of the reactionary legislation began to be evident. This expressed itself chiefly in a diminution of the time given to memoriter work in religion, and the introduction in its place of work in German history and geography, with some work in natural science. In the Teachers' Seminaries instruction in German literature, formerly rigidly excluded, was now added. It was not, however, until after the unification of Germany, following the Franco-Prussian War, and the creation of Imperial Germany under the directive guidance of Bismarck, that any real change took place. Then the changes were due to new political, religious, social, industrial, and economic forces which belong to the later period of German history.

In 1872 a new law gave to the Prussian elementary schools a new course of study; reasserted the authority of the State in education; extended the control of the public authorities; and made the State instead of the Church the authority even for their religious instruction.[1] The schools were now to be used as of old to build up and strengthen the nation, but particularly to support the new Prussian idea as to the work and function of the State.

[1] "The motive which dictated the law of 1872 on school supervision (namely, placing the State in complete control of the supervision of religious as well as other instruction) was, as is well understood, to strengthen the hands of the government in its struggle with the Catholic hierarchy, which was then prominently before the public. The law affirmed again the sovereign right of the State over the whole school system, including the elementary or people's schools." (Nohle, Dr. E., *History of the German School System*, p. 79.)

Realien were given a new prominence, because of new industrial needs, and the instruction in religion was revamped. The old memoriter work was greatly reduced, and in its place an emotional and political emphasis was given to the religious instruction. To make the school of the people an instrument for fighting the growth of social democracy, and a support for the throne and government, instruction in religion was "placed in the center of the teacher's work," and teachers were given to understand that they were "members of an educational army and expected loyally to follow the flag." The secondary schools also were redirected. A new emphasis on scientific subjects and modern languages replaced the earlier emphasis on Greek. The Emperor interfered (**R. 368**) to force a revision of the gymnasial programs better to adapt them to modern needs. In particular were the universities of all the States unified and nationalized, and great technical universities created. Science, commerce, technical work, modern languages, and government were stressed in the instruction of the leaders.

Deciding clearly where the nation was to go and the route it was to follow, and that education for national ends was one of the important means to be employed, the different parts of the educational systems in the States — elementary schools, secondary schools, universities, normal schools, professional schools, technical schools, continuation schools — were carefully integrated into a unified state system, thoroughly national in spirit, and given a definite function to perform in the work which the Nation set itself to carry through. Nowhere have teachers been so well trained to play their part in a national plan, and nowhere have teachers acquitted themselves more worthily, from the point of view of the Government. As Alexander[1] has well said:

During the nineteenth century the leaders of Germany decided that Germany should assume leadership in the world in every line of endeavor, particularly in commerce and world power. They set this as the very definite goal of their national ambition. The next question was how that aim could be accomplished. It was to be done through education. Accordingly school systems were organized with this aim in view. In a State such as the Germans proposed building there were to be leaders and followers. The followers were to be trained for a docile, efficient German citizenship; that is, the lower classes were to be made into God-fearing, patriotic, economically-independent Germans. This was the task of the *Volksschule*, and it has been wonder-

[1] *Alexander, Thomas, The Prussian Elementary Schools*, pp. 537–38.

fully well accomplished. This type of German is created to do the manual labor of the State.

The leaders were to be trained in middle and higher schools and in the universities. There were to be different grades of leaders; leaders in the lower walks of life, leaders in the middle walks of life, and leaders of the nation. The higher schools and the universities were employed to produce these types of leaders. . . . The leaders think and do; the followers merely do. The schools were organized for the express purpose of producing just these types.

So well was this system and plan working that, had the Imperial Government not been so impatient of that slower but surer progress by peaceful means, and staked all on a gambler's throw, in another half-century the German nation might have held the world largely in fee. As it is, the results which the Germans attained by reason of definite aims and definite methods are both an encouragement and a warning to other nations.

QUESTIONS FOR DISCUSSION

1. Point out the extent of the educational reorganization which resulted from the reform work begun at Halle.
2. How do you explain the very early German interest in compulsory school attendance, when such was unknown elsewhere in Europe?
3. Compare the Prussian Regulations of 1737 with what was common at that time in practice in the parishes of the American Colonies.
4. Show the wisdom of the early Prussian kings in working at school reform through the Church. Could they well have worked otherwise? Why?
5. How do you explain such a slow development of a professional teaching body in Prussia, when all the state influences had for so long been favorable to educational development?
6. Show that the Oberschulcollegium Board marked the beginnings of a State Ministry for Education for Prussia.
7. Show that the spirit of the Prussian leaders, after 1806, was a further expansion of the German national feeling which arose in the Period of Enlightenment.
8. Show that the reorganization of elementary education, and the creation of the University of Berlin, were almost equally important events for the future of German lands.
9. Show that the work of Prussia, in using the schools for national ends, was: (*a*) in keeping with the work of the French Revolutionary leaders, and (*b*) only a further extension of the organizing work done by Frederick the Great.
10. Show how the universities of Germany early took the lead of the universities of the world, and the influence of this fact on national progress.
11. Enumerate the new nineteenth-century tendencies observable in the early educational organization in Prussia.
12. Explain the marked mid-nineteenth-century reaction to educational development which set in.
13. Explain the early and marked welcome accorded science-study in German lands.
14. Explain in what ways Prussia attained an educational leadership, ahead of other nations.

SELECTED READINGS

In the accompanying *Book of Readings* the following selections, illustrative of the contents of this chapter, are reproduced:

273. Barnard: The Organizing Work of Frederick William I.
274. Prussia: The School Code of 1763.
275. Prussia: The Silesian School Code of 1765.
276. Austria: The School Code of 1774.
277. Fichte: Addresses to the German Nation.
278. Mann: The Prussian Elementary Teacher and his Training.
279. Dinter: Prussian Schools and Teachers as he found them.
280. Cousin: Report on Education in Prussia.
281. Mann: The Military Aspect of Prussian Education.

QUESTIONS ON THE READINGS

1. Explain the interest of Frederick William I (**273**) in elementary education.
2. Characterize, from the Codes of 1763 (**274**) and 1765 (**275**), and cite paragraph to show: (*a*) The type of instruction ordered provided; (*b*) the type of teacher expected; (*c*) the character of the attendance required; and (*d*) the character of the continuation training ordered.
3. Show the similarity in their main lines of the Prussian (**274**) and Austrian (**276**) Codes.
4. Would the reasoning of Fichte (**277**) apply to any crushed nation? Illustrate.
5. Do we select teachers for training as carefully in the United States today as they did in Prussia eighty years ago (**278**)? Could we?
6. Did such conditions as Dinter describes (**279**) exist, even later, with us?
7. Was the Prussian school system, as described by Cousin (**280**), a centralized or a decentralized system?
8. Show that Mann's reasoning as to the strength of the Prussian school system (**281**) was thoroughly sound.

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*Barnard, Henry. "Public Instruction in Prussia"; in *American Journal of Education*, vol. XX, pp. 333–434.
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*Paulsen, Fr. *German Education, Past and Present.*
*Paulsen, Fr. *The German Universities.*
*Russell, James. *German Higher Schools.*
Seeley, J. R. *Life and Times of Stein*, vol. I.

CHAPTER XXIII

NATIONAL ORGANIZATION IN FRANCE AND ITALY

I. NATIONAL ORGANIZATION IN FRANCE

Lines of development marked out by the Revolution. The Revolution proved very disastrous to the old forms of education in France. The old educational foundations, accumulated through the ages, were swept away, and the teaching congregations, which had provided the people with whatever education they had enjoyed, were driven from the soil. The ruin of educational and religious institutions in Russia under the recent rule of the Bolshevists is perhaps comparable to what happened in France. Many plans were proposed by the Revolutionary philosophers and enthusiasts, as we have seen (chapter xx), to replace what had once been and to provide better than had once been done for the educational needs of the masses of the people, but with results that were small in comparison with the expectations of the legislative assemblies which considered or approved them. Nevertheless, the directions of future progress in educational organization were clearly marked out before Napoleon came to power, and the work which he did was largely an extension, and a reduction to working order, of what had been proposed or established by the enthusiasts of the pre-revolutionary and revolutionary periods. At the time of the Revolution the State definitely took over the control of education from the Church, and the work of Napoleon and those who came after him was to organize public instruction into a practical state-controlled system.

In effecting this organization, the preceding discussions of education as a function of the State and the desirable forms of organization to follow all bore important fruit, and the forms finally adopted embodied not only the ideas contained in the legislation of the revolutionary assemblies, but the earlier theoretical discussion of the subject by Rolland (p. 510), Diderot (p. 511), and Talleyrand (p. 513) as well. They embodied also the peculiar administrative genius of France — that desire for uniformity in organization and administration — and hence stand in contrast to *the state* educational organizations worked out about the same *time in* German lands. The German States, as we have seen, had

for long been working toward state control of education, but when this was finally attained they still permitted a large degree of local initiative and control. The French, on the contrary, made the transition in a few years, and the system of state control which they established provided for uniformity, and for centralized supervision and inspection in the hands of the State. The



FIG. 174. AN OLD FOUNDATION TRANSFORMED

This was an ancient château in France. In 1604 Henry IV gave it to the Jesuits for a school. In 1791 it became national property, and was transformed into a Military College

forms for state control and education adopted in the two countries were also expressive of age-long tendencies in each. For three centuries German political organization, as we have seen, had been extremely decentralized on the one hand, and had been slowly evolving a system of education under the joint control of the small States and the Church on the other. In France, on the contrary, centralization of authority and subordination to a central government had been the tendency for an even longer period. When the time arrived for the State to take over education from the Church, it was but natural that France should tend toward a much more highly centralized control than did the German States, and the differing political situations of the two countries, at the opening of the nineteenth century, gave added emphasis to these differing tendencies.

In consequence, Prussia and the other German States early achieved a form of state educational organization which empha-

sized local interest and the spirit of the instruction, whereas France created an administrative organization which emphasized central control and, for the time, the form rather than the spirit of instruction. This was well pointed out by Victor Cousin (**R. 280**), in contrasting conditions in Prussia with those existing in France.

Napoleon begins the organization of education. In 1799 Napoleon became First Consul and master of France, and in 1804 France, by vote, changed from a Republic to an Empire, with Napoleon as first Emperor. Until his banishment to Saint Helena (1815) he was master of France. A man of large executive capacity and an organizing genius of great ability, whether he turned to army organization, governmental organization, the codification of the laws, or the organization of education, Napoleon's practical and constructive mind quickly reduced parts to their proper places in a well-regulated scheme. Shortly after he became Consul he took up, among other things, the matter of educational organization.

His first effort was in 1800, when he transformed the old humanistic Collège Louis le Grand (founded 1567) and created four military colleges from its endowment. One of these colleges he later, in characteristic fashion, transformed into a School of Arts and Trades (**R. 282**). In 1802 he signed the famous Concordat with the Pope. This restored the priests to the churches, with state aid for their stipends, and virtually turned over primary education again to the Church for care and control. The "Brothers of the Christian Schools" (p. 515) were recalled the next year and especially favored, and soon established themselves more firmly than before the Revolution.



FIG. 175.
COUNT DE FOURCROY
(1755–1809)

In 1802 Napoleon first turned his attention to a general organization of public instruction by directing Count de Fourcroy, a distinguished chemist who had been a teacher in the Polytechnic School, and whom he appointed Director of Public Instruction, to draw up, according to his ideas, *an organizing* law on the subject. This became the **Law of 1802.** *It was divided* into nine chapters, as follows:

I. Degrees of Instruction.
II. Primary Schools.
III. Secondary Schools.
IV. Lycées.
V. Special Schools.
VI. The Military School.
VII. The National Pupils.
VIII. The *nationales pensions*
IX. General regulations.

1. Primary schools. The chapter on primary schools virtually reënacted the Law of 1795 (**R. 258 b**). Each commune [1] was required to furnish a schoolhouse and a home for the teacher. The teacher was to be responsible to local authorities, while the supervision of the school was placed under the prefect of the Department. The instruction was to be limited to reading, writing, and arithmetic, and the legal authorities were enjoined "to watch that the teachers did not carry their instructions beyond these limits." The teacher was to be paid entirely from tuition fees, though one fifth of the pupils were to be provided with free schooling. The State gave nothing toward the support of the primary schools.

The interest of Napoleon was not in primary or general education, but rather in training pupils for scientific and technical efficiency, and youths of superior ability for the professions and for executive work in the kind of government he had imposed upon France. To this end secondary and special education were made particular functions of the State, while primary education was left to the communes to provide as they saw fit. They could provide schools and the parents could pay for the teacher, or not, as they might decide. There was no compulsion to enforce the requirement of a primary school, and no state aid to stimulate local effort to create one. In consequence not many state primary schools were established, and primary education remained, for another generation, in the hands of private teachers and the Church.

2. Secondary schools. Chapters III and IV of the Law of 1802 made full provision for two types of secondary schools — the Communal Colleges and the Lycées [2] — to replace the Central Higher Schools established in 1795 (p. 518). These latter had lacked sadly in internal organization. They were merely day schools, lacking the dormitory and boarding arrangements which for over three centuries had characterized the French *collèges*. As

[1] The commune in France was the smallest unit for local government, and corresponded to the district, town, or township with us, or with the Church parish under the old régime. There were approximately 37,000 communes in France. The Department was a much larger unit, France being divided, for administrative purposes, into 82 Departments, these corresponding to a rather large county.

[2] By this term what is known elsewhere as secondary school must be understood. See footnote, *page 272, for* explanation of the term.

a result they had not prospered. The Law of 1802 now replaced them with two types of residential secondary schools, in which the youth of the country, under careful supervision and discipline, might prepare for entrance to the higher special schools. These fixed the lines of future French development in secondary schools.

The standard secondary school now became known as the *Lycée*. These institutions corresponded to the Colleges under the old régime, of which the College of Guyenne (**R. 136**) was a type. The instruction was to include the ancient languages, rhetoric, logic, ethics, belles-lettres, mathematics, and physical science, with some provision for additional instruction in modern languages and drawing. Each was to have at least eight "professors," an administrative head, a supervisor of studies, and a steward to manage the business affairs of the institution. The State usually provided the building, often using some former church school which had been suppressed, and the cities in which the Lycées were located were required to provide them with furniture and teaching equipment. The funds for maintenance came from tuition fees, boarding and rooming income, and state scholarships, of which six thousand four hundred were provided.

Besides the Lycées, every school established by a municipality, or kept by an individual, which gave instruction in Latin, French, geography, history, and mathematics was designated as a secondary school, or Communal College. These institutions usually offered but a partial Lycée course, and were tuition schools, being patronized by many parents whose tastes forbade the sending of their children to the lower-class primary schools. A license from the Government to operate was necessary before masters could be employed. They were to be maintained by the municipality, without any state encouragement beyond some grants for capable teachers and scholarships in the Lycées for meritorious pupils.

Within two years after the enactment of the Law of 1802 there had been created in France 46 Lycées, 378 secondary schools of various degrees of completeness, and 361 private schools of secondary grade had been opened. A number of these disappeared later, in the reorganization of 1808. For the supervision of all these institutions the Director General of Public Instruction appointed three Superintendents of Secondary Studies; and for the work of the schools he outlined the courses of instruction in detail, laid down the rules of administration, prepared and selected the *textbooks*, and appointed the "professors."

Special or Higher Schools. The chapter of the Law of 1802 on Special Schools made provision for the creation of the following special "faculties" or schools for higher education for France:

3 medical schools, to replace the *Schools of Health* of 1794 (p. 518).
10 law schools; increased to 12 in 1804 (Date of *Code Napoléon*, p. 518).
4 schools of natural history, natural philosophy, and chemistry.
2 schools of mechanical and chemical arts.
1 mathematical school.
1 school of geography, history, and political economy.
A fourth school of art and design.
Professors of astronomy for the observatories.

In 1803 the School of Arts and Trades was added (**R. 282**), and in 1804, after Napoleon had signed the Concordat with the Pope, thus restoring the Catholic religion (abolished 1791), schools of theology were added to the above list.

We have here, clearly outlined, the main paths along which French state educational organization had been tending and was in future to follow. The State had definitely dispossessed the Church as the controlling agency in education, and had definitely taken over the school as an instrument for its own ends. Though primary education had been temporarily left to the communes, and was soon to be turned over in large part to be handled by the Church for a generation longer, the supervision was to remain with the State. The middle-class elements were well provided for in the new secondary schools, and these were now subject to complete supervision by the State. For higher education groups of Special Schools, or Teaching Faculties, replaced the older universities, which were not re-created until after the coming of the Third Republic (1871). The dominant characteristics of the state educational system thus created, aside from its emphasis on secondary and higher education, were its uniformity and centralized control. These characteristics were further stressed in the reorganization of 1808, and have remained prominent in French educational organization ever since.

Creation of the University of France. By 1806 Napoleon was ready for a further and more complete organization of the public instruction of the State, and to this end the following law was now enacted (May 10, 1806):

Sec. 1. There will be formed, under the name of Imperial University, a body exclusively commissioned with teaching and public education *throughout the Empire.*

Sec. 2. The members of this corporation can contract civil, special, and temporary obligations.

Sec. 3. The organization of this corps will be given in the form of a law to the legislative body in the session of 1810.

In 1808, without the formality of further legislation, Napoleon issued an Imperial Decree creating the University of France. This was not only Napoleon's most remarkable educational creation, but it was an administrative and governing organization for education so in harmony with French spirit and French governmental ideas that it has persisted ever since, though changed somewhat in form with time.

The Decree began by declaring that "public instruction, in the whole Empire, is confined exclusively to the University," and that "no school, nor establishment for instruction, can be formed independent of the Imperial University, and without the authority of its chief." Unlike the University of Berlin (p. 574), created a year later, this was not a teaching university at all, but instead a governing, examining, and disbursing corporation,[1] presided over by a Grand Master and a Council of twenty-six members, all appointed by the Emperor. This Council decided all matters of importance, and exercised supervision and control over education of all kinds, from the lowest to the highest, throughout France.[2] To assist the Council, general inspectors for medicine, law, theology, letters, and science were provided for, to visit and "examine the condition of instruction and discipline in the faculties, *lycées*, and colleges; to inform themselves in regard to the fidelity and ability of professors, regents, and ushers; to examine the students; and to make a complete survey of those institutions, in their whole administration." Beneath the Grand Master and Council the State was divided into twenty-seven "Academies" (administrative districts), each of which had a Rector, a Council of ten, and Inspectors, all appointed by the Grand Master. These

[1] The University had at its disposal approximately 2,500,000 francs a year. This was derived from a state grant of 400,000 francs, the income from the property still remaining from the old confiscated universities, and the remainder largely from examination fees. In 1850 its property was taken over by the State, and the University was changed into a state department.

[2] This type of administrative organization is at first not easy for the American student to understand. The University of the State of New York — virtually the department of public instruction for the State — is our closest American analogy. On the banishment of Napoleon and the restoration of the monarchy, in 1815, the *Grand Master* and Council were replaced by a Commissioner of Public Instruction, *with Assistant* Commissioners for the different divisions, and in 1820 this was further *changed into* a Royal Council of Public Instruction.

exercised jurisdiction over teachers and pupils in all schools, and decided all local matters, subject to appeal to the Grand Master and Council.

Under this new administrative organization but little change was made in the schools from that provided for in the law of 1802. Primary education remained as before, private schools and Church schools supplying most of the need. All were under the supervision of the University, and all were instructed to

make as a basis of their instruction: (1) the precepts of the Catholic religion; (2) fidelity to the Emperor, to the imperial monarchy, the depository of the happiness of the people, and to the Napoleonic dynasty, the conservator of the unity of France, and of all the ideas proclaimed by the Constitution.

The *Lycées* and Communal Colleges continued, much as before,[1] and during the half-century which followed, experienced a steady and substantial growth.

DEVELOPMENT OF THE LYCÉES

Year	1809	1811	1813	1829	1847	1866
Lycées	35	36	36	36	54	74
Pupils	9,068	10,926	14,492	15,087	23,207	34,442
Free pupils	4,199	4,008	3,500	1,600		

DEVELOPMENT OF THE COMMUNAL COLLEGES

Year	1809	1815	1830	1849	1855	1866
Colleges	273	323	332	306	244	251
Pupils	18,507	19,320	27,308	31,706	32,500	33,038

The Special Higher Schools were also continued, and to the list given (p. 593) Napoleon added (1808) a Superior Normal School (**R. 283**) to train graduates of the *Lycées* for teaching. This opened in 1810, with thirty-seven students and a two-year course of instruction, and in 1815 a third year of method and practice work was added. With some varying fortunes, this institution has continued to the present.

The new interest in primary education. The period from 1815 to 1830 in France is known as the Restoration. Louis XVIII was made King and ruled until his death in 1824, and his brother Charles X who followed until deposed by the Revolution of 1830. Though a representative of the old régime was recalled on the abdication of Napoleon, the great social gains of the Revolution were retained. There was no odious restoration of privilege and absolute monarchy. Frenchmen continued to be equal before

[1] In 1909 a decree restored Greek and Latin to their old place of first importance in the Lycées, thus destroying the strong interest in scientific instruction, in so far as the higher secondary schools were concerned, which had characterized the Revolution.

the law; a form of constitutional government was provided; the right of petition was recognized; and the system of public instruction as Napoleon had organized it continued almost unchanged. For a decade at least there was less political reaction in France than in other continental States.

In matters of education, what had been provided was retained, and there seems (**R. 285**) to have been an increasing demand for additions and improvements, particularly in the matter of primary and middle-class schools, and a willingness on the part of the communes to provide such advantages. Some small progress had been made in meeting these demands, before 1830.

In 1816 a small treasury grant (50,000 francs) was made for school books, model schools, and deserving teachers in the primary schools, and in 1829 this sum was increased to 300,000 francs. In 1818 the "Brothers of the Christian Schools" were permitted to be certificated for teaching on merely presenting their Letter of Obedience from the head of their Order, and in 1824 the cantonal school committees were remodeled so as to give the bishops and clergy entire control of all Catholic primary schools. Monitorial instruction was introduced from England by private teachers, in an effort to supply the beginnings of education at small expense, and for a time this had some vogue, but never proved very successful. In 1815 the *Lycées* were renamed Royal Colleges, but in 1848 the old name was restored, and has since been retained. In 1817 there were thirty-six *Lycées*, receiving an annual state subsidy of 812,000 francs; thirty years later the fifty-four in existence were receiving 1,500,000 francs. From 1822 to 1829 the Higher Normal School was suppressed, and twelve elementary normal schools were created in its stead.

Early work under the Monarchy of 1830. In July, 1830, Charles X attempted to suppress constitutional liberty, and the people rose in revolt and deposed him, and gave the crown to a new King, Louis-Philippe. He ruled until deposed by the creation of the Second Republic, in 1848. The "Monarchy of 1830" was supported by the leading thinkers of the time, prominent among whom were Thiers and Guizot, and one of the first affairs of State to which they turned their attention was the extension downward of the system of public instruction. The first steps were an increase of the state grant for primary schools (1830) to a million francs a year; the overthrow of the control by the priests of the cantonal school committees (1830); the abolition (1831) of

the exemption of the religious orders from the examinations for teaching certificates; and the creation (1830–31) of thirty new normal schools.

The next step was to send (1831) M. Victor Cousin — Director of the restored Higher Normal School of France — on a mission to the German States, and in particular to Prussia, to study and report on the system of elementary education, teacher training, and educational organization and administration which had done so much for its regeneration. So convincing was Cousin's *Report*[1] that, despite bitter national antipathies, it carried conviction throughout France. "It demonstrated to the government and the people the immense superiority of all the German States, even the most insignificant duchy, over any and every Department of France, in all that concerned institutions of primary and secondary education." Cousin pronounced the school law of Prussia (**R. 280**) "the most comprehensive and perfect legislative measure regarding primary education" with which he was acquainted, and declared his conviction that "in the present state of things, a law concerning primary education is indispensable in France." The chief question, he continued, was "how to procure a good one in a country where there is a total absence of all precedents and experience in so grave a matter." Cousin then pointed out the bases, derived from Prussian experience and French historical development, on which a satisfactory law could be framed (**R. 284 a-c**); the desirability of local control and liberty in instruction (**R. 284 f-g**); and strongly recommended the organization of higher primary schools (a new creation; first recommended (1792) by Condorcet, p. 514) as well as primary schools (**R. 284 e**) to meet the educational needs of the middle classes of the population of France.



FIG. 176
VICTOR COUSIN
(1792–1867)

The Law of 1833. On the basis of Cousin's *Report* a bill, making the maintenance of primary schools obligatory on every commune; providing for higher primary schools in the towns and cities; additional normal schools to train teachers for these schools; a

[1] *Report on the Condition of Public Instruction in Germany, and Particularly in Prussia.* Paris, 1831. Reprinted in London, 1834; New York City, 1835.

corps of primary school inspectors, to represent the State; and normal training and state certification required to teach in any primary school, was prepared. In an address to the Chamber of Deputies, in introducing the bill (1832), M. Guizot,[1] the newly appointed Minister for Public Instruction, set forth the history of primary instruction in France up to 1832 (**R. 285 a**); described the two grades of primary instruction to be created (**R. 285 b**); and, emphasizing Cousin's maxim that "the schoolmaster makes the school," dwelt on the necessity for normal training and state certification for all primary teachers (**R. 285 c**). In preparing the bill it was decided not to follow the revolutionary ideas of free instruction, by lay and state teachers, or to enforce compulsion to attend, and for these omissions M. Guizot, in his *Mémoires* (**R. 286**), gives some very interesting reasons.

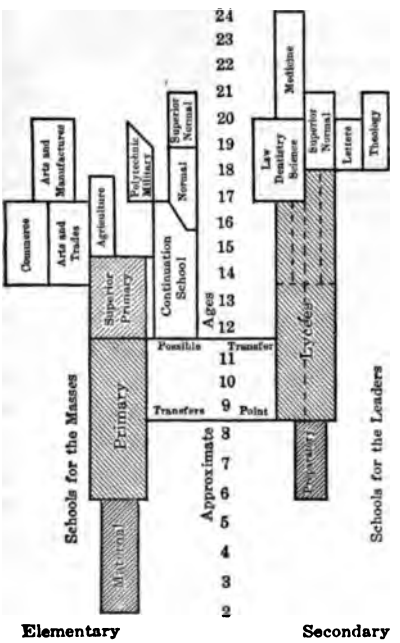


FIG. 177. OUTLINE OF THE MAIN FEATURES OF THE FRENCH STATE SCHOOL SYSTEM

The bill became a law the following year, and is known officially as the Law of 1833. This Law forms the foundations upon which the French system of national elementary education has been developed, as the Napoleonic Law of 1802 and the Decree of 1808 have formed the basis for secondary education and French state administrative organization. A primary school was to be established in every commune, which was to provide the building, pay a fixed minimum salary to the teacher, and where able maintain the school. The State reserved the right to fix the pay of the teacher, and even to approve his appointment. A tuition fee was to be paid for attendance, but those who could not pay were to

[1] François Pierre Guillaume Guizot was Minister for Public Instruction from *1832 to 1837*, and head of the French government from 1840 to 1848. He was *throughout* his entire political career a conservative, anxious to preserve constitutional government under a monarchy and stem the tide of republicanism.

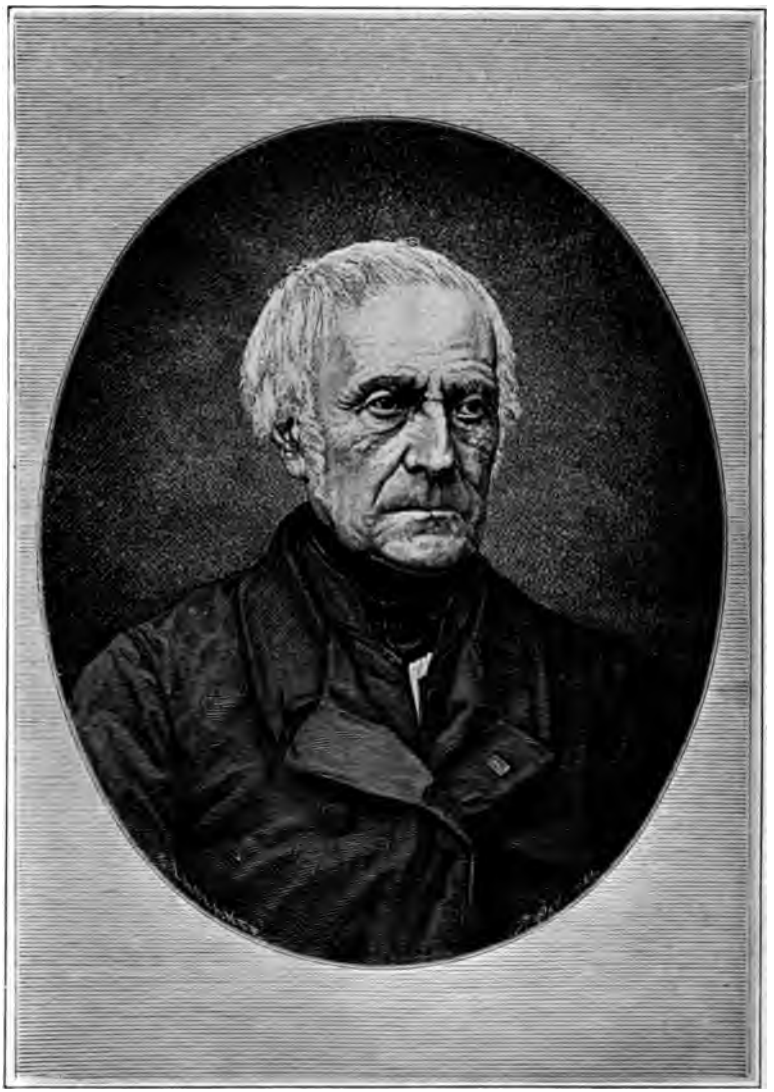


PLATE 14. FRANÇOIS PIERRE GUILLAUME GUIZOT (1787–1874)
Creator of the French primary school system



be provided with free places. The primary schools were to give instruction in reading, writing, arithmetic, the weights and measures, the French language, and morals and religion. The higher primary schools were to build on these subjects, and to offer instruction in geometry and its applications, linear drawing, surveying, physical science, natural history, history, geography, and music, and were to emphasize instruction in "the history and geography of France, and in the elements of science, as they apply it every day in the office, the workshop, and the field." [1] These latter were the *Bürgerschulen*, recommended by Cousin (**R. 284 e**) on the basis of his study of Prussian education.[2]

The primary schools were to follow a uniform plan, and as a guide a *Manual of Primary Instruction* was issued, giving detailed directions as to what was to be done. In sending out a copy of the Law to the primary teachers of France, M. Guizot enclosed a personal letter to each, informing him as to what the government expected of him in the new work (**R. 287**). During the four years that M. Guizot remained Minister of Public Instruction he rendered a remarkable service, well described by Matthew Arnold (**R. 288**), in awakening his countrymen to the new problem of popular education then before them.

The results under the Law of 1833 were large,[3] and the subsequent legislation under the monarchy of 1830 was important. For the first time in French history an earnest effort was made to provide education suited to the needs of the great mass of the people, and the marked development of schools which ensued showed how eagerly they embraced the opportunities offered their chil-

[1] We see here the beginnings of education in agriculture, in which the French were pioneers.

[2] The schools, though, were not very successful, because of social reasons. Parents who could afford to do so sent their children to the much higher-priced Communal Colleges or *Lycées*, where Latin was the main study, in preference to sending them to a scientific, modern-type, middle-class school, as conferring a better social distinction on both pupils and parents.

[3] By 1838 there were 14,873 public schools the property of the communes; by 1847 there were 23,761; and by 1851 but 2500 out of approximately 37,000 communes were without schools. There were also over six thousand religious schools by 1850. By 1834 the number of boys in the communal schools was 1,656,828, and a decade later over two millions. The thirteen normal schools of 1830 had grown to seventy-six by 1838, with over 2500 young men then in training for teaching. In 1836 the Law of 1833 was extended to include, where possible, schools for girls as well, and the creation of a new set of normal schools to train schoolmistresses was begun. By 1848 over three and a half millions of children, of both sexes, were receiving instruction in the primary schools. In 1835 primary inspectors, those "sinews of public instruction," as Guizot termed them, were established, one for every Department, by royal decree. By 1847 there were two inspectors-general and 13 inspectors and sub-inspectors at work in France.

DEVELOPMENT OF INFANT SCHOOLS

Year.....	1827	1837	1840	1843	1846	1850	1863	1886	1897
Schools..	1	251	555	1489	1861	1735	3308	6696	5683

dren, though the schooling was neither compulsory nor gratuitous. In 1837 Infant Schools, for still younger children, were authorized, and in 1840 state aid for these was begun. In 1836 classes for adults, first begun in Paris in 1820, were authorized generally, but it was not until 1867 that these were formally incorporated into the state school system. In 1845 state aid for the Communal Colleges, as well as for the *Lycées*, was begun.

Reaction after 1848. In France, as in Europe generally, the people were steadily becoming more liberal, as they became better educated, while the rulers were becoming more autocratic. The result was the series of revolutions of 1848, which broke out first in France, and finally extended to most of the countries of continental Europe. In France the King, Louis-Philippe, was forced to abdicate; a Republic, based on universal manhood suffrage, was proclaimed; and Louis Napoleon, a nephew of Napoleon I, was elected President. In 1851 Napoleon established himself as Dictator; prepared a new constitution providing for an Empire; and, in 1852, dissolved the Second Republic and assumed the title of Emperor Napoleon III. This Second Empire lasted until 1870, when France was humiliated by the Prussians as the latter had been by Napoleon I in 1806. The Emperor and his armies were taken prisoners (1870) and, in 1871, the Prussians occupied Paris and crowned the new Emperor of united and Imperial Germany in the palace of the French Kings at Versailles. A Third Republic now succeeded, and this has lasted to the present time.

The period from 1848 to 1870 in France was a period of middle-class rule, and reaction in education as in government. In 1848 a Sub-Commission on Primary Education reported in opposition to the state primary schools. The troubles of 1848 had brought to view the political restlessness which had taken possession of the teachers, as well as other classes in society. The new schools were naturally suspected of being the source of the popular discontent. Many teachers had sympathized with, and some had taken part in the disturbances, and teachers generally were now placed under close surveillance. Some of the leaders were forced into exile until after 1870. Religious schools, regarded as more favorable to monarchical needs and purposes, were now encouraged, and the number of religious schools increased from 6464 in 1850, to 11,391

by 1864. Private schools, too, were given full freedom to compete with the state schools, and the pay of the primary teachers was reduced. The course in the normal schools was condemned as too ambitious, and, in 1851, was cut down. The course of instruction in the primary schools, on the other hand, was, unlike in Prussia, broadened instead of restricted, and in particular emphasis was placed, in keeping with nearly a century of French tradition, on scientific and practical subjects.[1] The law of 1850 stated the requirements for primary schools as follows:

Art. 23. Primary instruction comprises moral and religious instruction, reading, writing, the elements of the French language, computation, and the legal system of weights and measures. It may comprise, in addition, arithmetic applied to practical operations, the elements of history (a required subject after 1867) and geography, notions of the physical sciences and of natural history applicable to the ordinary purposes of life, elementary instruction in agriculture, trade, and hygiene; and surveying, leveling, linear drawing, singing, and gymnastics.

Religious instruction prospered under the Second Empire, and the state primary schools lost in importance. The *Lycées* continued largely as classical institutions, though after 1865 the crowding of the rising sciences began to dispute the supremacy of classical studies. There were, however, many voices of discontent, particularly from exiled teachers (**R. 289**), and the way was rapidly being prepared for the creation of a stronger and better state school system as soon as political conditions were propitious.

Revolutionary ideals at last realized. With the creation of the Third Republic, in 1870, a change from the old conditions and old attitudes took place. Up to about 1879 the new government was in the control of those who were at heart sympathetic with the old conditions, but were forced to accept the new; from 1879 to 1890 was a transition period; and since 1890 the Republic has grown steadily in strength and regained its position among the great powers of the world. The first few years of the new Republic were devoted to paying the Prussian indemnity and clearing the soil of France of German armies, but, after about 1875, education became a great national interest among the leaders of France.[2] France saw, somewhat as did Prussia after 1806, the

[1] This was in large part due to manufacturing and business needs, as France was rapidly forging ahead during the period as a manufacturing and commercial nation.

[2] Prominent among these, perhaps most prominent, was Jules Ferry, Mayor of Paris during the trying period of 1870–71, then member of the French legislature, and Minister of Public Instruction in a number of cabinets between 1879 and 1885. Drawing his inspiration from Condorcet's *Plan of Education* (p. 514; **R. 256**) and

necessity for creating a strong state system of primary, secondary, and higher schools to train the youth of the land in the principles of the Republic, strengthen the national spirit, advance the welfare of the State, and protect it from dangers both within and without.

PROGRESS OF PRIMARY EDUCATION IN FRANCE, DURING THE NINETEENTH CENTURY, AS SHOWN BY THE REDUCTION IN THE PERCENTAGE OF ILLITERACY AMONG ARMY CONSCRIPTS, AND AMONG PERSONS SIGNING THE MARRIAGE RECORDS

Years	*Army conscripts*	*Marriage records*	
		Men	*Women*
1790		53.0%	73.0%
1827	58.0%		
1833	47.8		
1840	42.8		
1845	37.8		
1850	35.7		
1855	33.7	32.0	47.0
1860	30.0	30.4	44.8
1865	24.4	27.5	41.0
1870	19.7	26.8	39.4
1875	16.0	20.0	31 0
1880	14.7	16.1	24.5
1885	11.5	13.0	20.2
1890	7.8	8.7	12.8
1896	5.1	5.8	7.8
1901	4.4	4.4	6.3

Millions were put into the building of schoolhouses (1878–88); new normal schools were established; a normal school for women was created in each of the eighty-seven departments of France; the academic and superior councils of public instruction were reorganized to eliminate clerical influences (1881); religious instruction was replaced by moral and civic instruction (R. 290); and clerical "Letters of Obedience" were no longer accepted, and all teachers were required to be certificated by the State. The Law of 1881, eliminating instruction in religion from the elementary schools, was followed, in 1886, by a law providing for the gradual replacement of clerical by lay teachers. In 1904, the teaching congregations of France were suppressed. All elementary education now became public, free, compulsory, and secular,[1] and teachers were required to be neutral in religious matters.[2]

Edgar Quinet's *Instruction of the People* (R. 289), he brought about the enactment of a series of reform school laws commonly known as the "Ferry Laws." These provided for free, compulsory, elementary education, to be given by laymen; secondary education for girls; the extension of normal schools; and enlarged aid by the State in the building up of popular education.

[1] "The non-sectarian school is not the work of a few advanced thinkers imposed upon a docile country. They would not have been able to create anything enduring if the French conscience had not been ready to follow them. This is what the adversaries of our schools do not wish to understand, cannot understand, or are anxious to conceal from those whom they direct. Certainly they have the right to

[2] "To each man his proper sphere; to the minister of religion the liberty of preaching the doctrine of the different churches, to teachers who teach in the name of the State, that is, of society, the right of limiting themselves to the field of universal human morals, together with the duty of refraining from any attack on religious beliefs. Neutrality is guaranteed by the secularization of the teaching body, and it must be strictly observed." (Compayré, Gabriel.)

Since 1871, also, technical and scientific education has been emphasized; the primary and superior-primary schools have been made free (1881) and compulsory (1882); classes for adults have been begun generally; the state aid for schools has been very greatly increased; *lycées* and colleges for women have been created (1880); the *lycées* modernized in their instruction;[1] and the reorganization and reëstablishment of a series of fifteen state universities of a modern type, begun in 1885, was completed in 1896. The reorganization and expansion of education in France since 1875 is a wonderful example of republican interest and energy, and is along entirely different lines from those followed, since the same date, in German lands.

After the lapse of nearly a century we now see the French Revolutionary ideas of gratuity, obligation, and secularization finally put into effect, and the state system of public instruction outlined by Condorcet (p. 514), in 1792, at last an accomplished fact.

II. NATIONAL ORGANIZATION IN ITALY

Importance of the work of Napoleon. So much has been written about the deluge of blood that took place in Paris in the days of the Commune and the time of the National Conventions, and of the military victories and autocratic rule of Napoleon Bonaparte, that it is difficult to appraise the importance of either, from the point of view of the progress of civilization and of the organization of modern political institutions, at its true worth. The faults

attempt a reaction according to their own preferences. They have no right to believe, nor even to allow it to be believed, that the creation of the non-sectarian school was the *coup de force* of an audacious minority. The non-sectarian school has come because the nation wished it. The program of moral instruction, long prophesied, conceived, and hoped for, was in the traditions of France as she marched forward toward her republican aspirations. This program is not only the conscious effort of the men who gave the school a new mission — that of laying the foundation of social peace through elementary instruction; it is the expression of the republican conscience of 1882." (Moulet, Alfred, *D'une éducation morale démocratique.*)

[1] "The most striking feature is that, in place of the one single and uniform course for all pupils, several are provided for their selection. Here is obvious the influence of the elective courses common in the United States, whose existence and success were reported on to the Minister of Public Instruction by the Commission to the World Exposition at Chicago, in 1893. The courses last seven years. The school period is divided into two cycles, first one of four years, and then one of three. In the first cycle, the pupils have a choice of two sections, one emphasizing the ancient and modern languages, the other the modern languages and science. In the second cycle there are four sections, viz., Græco-Latin; Latin-modern languages; Latin-scientific; and scientific-modern languages." (Compayré, Gabriel, *Education in France.*)

of both are prominent and outstanding, but it nevertheless was the merit of the Revolution that it enabled France, and along with France a good portion of western Europe, to rid itself of the worst survivals of the Middle Ages, while to Napoleon much of western Europe is indebted for the foundation of its civil institu-



FIG. 178. EUROPE IN 1810

Showing the control of France when Napoleon was at the height of his power

tions, unified legal procedure, beginnings of state educational organization, and modern governmental forms. Writing on this subject, Matthew Arnold [1] well said:

With all his faults, his [Napoleon's] reason was so clear and strong that he saw, in its general outlines at least, the just and rational type of civil organization which modern society needs, and wherever his armies went he instituted it.

[1] Arnold, Matthew, *Schools and Universities on the Continent*, p. 115, (London, *1868.*)

That the French Revolution's merit and service was a real one is shown by all the world, as it improves, getting rid more and more of the Middle Ages. That Napoleon's merit and service was a real one is shown by the bad governments which succeeded him having always got rid, when they could, of his work, and by the progress of improvement, when these governments became intolerable, and are themselves got rid of, always bringing it back. Where governments were not wholly bad, and did not get rid of Napoleon's good work, this work turns out to have the future on its side, and to be more likely to assimilate the institutions round it to its pattern than to be itself assimilated by them.

In the Italian States, the Netherlands, some of the French cantons of Switzerland, the Rhine countries, and the Danish peninsula, in particular, the rule of Napoleon, imposed by his armies, carried out by rulers of his selection, and maintained for a long enough period that the legal organization, civil order, unified government, and taste of educational opportunities of a new type which his rule brought became attractive to the people, in time proved deeply influential in their political development.[1] All these nations still show traces of the French influence in their state educational organization. We shall take the Italian States as a type, and examine briefly the influence on the development of state educational organization there which resulted from contact with the forward-looking rule of "The Great Emperor."

Decline in importance of education in Italy. In a preceding chapter (p. 503), we mentioned that the rule of Napoleon in northern Italy awakened the national spirit from its long lethargy, and caused Italian liberals to look forward, for the first time since the days of the Revival of Learning, to the time when the Italian States might be united into one Italian nation, with Rome as its capital. This became the work of the mid-nineteenth century (see dates, Fig. 179), though not fully completed until the World War of 1914–18. Italy stands to-day a great united nation, with a large future ahead of it, but as such it is entirely a nineteenth-century creation. From the time of its intellectual decline following the Renaissance, to the middle of the nineteenth century, Italy remained "a geographical expression" and split up into a number of little independent States; up to the time of Napoleon it was a part of the German-ruled "Holy Roman Empire."

[1] For example, by the Peace of Lunéville (1801), by which Napoleon took from the Germans all territory west of the Rhine and consolidated it, he extinguished 118 free cities, principalities, and petty states. In addition, he extinguished the separate existence of 160 others east of the Rhine. The importance of such consolidations for the future of Germany has been large.

After the great patriotic effort of the period of the Revival of Learning (p. 264) in Italy, and the rather feeble and unsuccessful attempts at a reform of religion which followed, the intellectual development of Italy was checked and turned aside for centuries by the triumph of an unprogressive and anti-intellectual attitude on the part of the dominant Church. The persecution of Galileo (p. 388) was but a phase of the reaction in religion which had by that time set in. Education was turned over to the religious orders, such as the Jesuits and the Barnabites, and instruction was turned aside from liberal culture and the promotion of learning to the support of a religion and the stamping out of heresy. Though a number of educational foundations were made, and some important undertakings begun after the days when her universities were crowded and Florence and Venice vied with one another for the intellectual supremacy of the western world, the spirit nevertheless was gone, and both education and government settled down to a tenacious preservation of the existing order. Scholars ceased to frequent the schools of Italy; the universities changed from seats of learning to degree-conferring institutions;[1] the intellectual capitals came to be found north of the Alps; and the history of educational progress ceased to be traced in this ancient land. In the early part of the eighteenth century the schools there reached perhaps their lowest intellectual level.

The beginnings of reform in Savoy. The first and almost the only attempt to change this condition, before Napoleon's armies went crashing through the valley of the Po, was made in the seventeenth century by two Dukes of Savoy. By decrees of 1729 and 1772 they took the control of the secondary (Latin) schools in their little duchy from the religious orders, and established a Council of Public Instruction to reform the university examinations, see that teachers were prepared for the Latin schools, and take over in the name of the authorities of the duchy the control of education. Though inspired by a political interest, the two dukes brought into their little kingdom the much-needed ideas of honest work, effective administration, and public spirit, and laid the foundations for the control of education by the public authorities later on. The only other attempt to improve conditions

[1] Bologna, for example, had 166 professors in the early seventeenth century, but by 1737 it had but 62. The universities came chiefly to be places where young men obtained degrees but not learning. At Naples a noble family by the name of Avellino came to have the power of virtually selling degrees in law and medicine.

came in Lombardy, in 1774, which then was a part of the Austrian dominions and felt the short-lived reforms of Maria Theresa (p. 562; R. 276). Elsewhere in Italy conditions remained unchanged until the time of Napoleon.

Napoleon revives the national spirit. In 1796 Napoleon's armies invaded Sardinia, Lombardy, and the valley of the Po, and he soon extended his control to almost all the Italian peninsula. For nearly two decades thereafter this collection of little States felt the unifying, regenerating influence of the organizing French. Monasteries and convents and religious schools were transformed into modern teaching institutions, brigandage was put down, and efficient and honest government was established. The ideas of the French Law of 1802 as to education were applied. Every town was ordered to establish a school for boys, to teach the reading and writing of Italian and the elements of French and Latin; the secondary schools were modernized; and the universities were completely reorganized. Some of the universities were reduced to *licei* (*lycées;* secondary schools), while others were strengthened and their revenues turned to better purposes. The universities at Naples and Turin in particular were transformed into strong institutions, with a decided emphasis on scientific studies. A normal school was founded at Pisa, on the model of the one at Paris. New standards in education were set up, the study of the sciences was introduced into the secondary schools, and the study of medicine and law was regenerated.

With the fall of Napoleon his work was largely undone. The firm, just, and intelligent government which he had given Italy — something the land had not known for ages — came to an end. The little States were "handed back to the reactionary dynasts whose rule was neither benevolent nor intelligent, while the ever-ready Austrian army crushed out any local movement for liberal institutions." The laws regarding education were repealed, and the schools the French had established were closed as revolutionary and dangerous. The normal school at Pisa ceased to exist; the university at Naples was dismantled; the one at Turin was closed; and the Jesuits were allowed to return and reorganize instruction. The result was that a common discontent with ensuing conditions made Italians conscious of their racial and historical unity, and this finally expressed itself in the revolutions of 1848. These failed at the time, and the heel of the Austrian oppressor came down harder than before. Liberty of the press

practically ceased. The national leaders went into exile for safety. The prisons were filled with political offenders. The schools were closed or ceased to influence. The Pope, fearing the



FIG. 179. THE UNIFICATION OF ITALY, SINCE 1848

end of his earthly kingship approaching, united firmly with the Austrians to resist liberal movements. Finally, under the leadership of the enlightened King of Sardinia, Victor Emmanuel (1849–78) and his Prime Minister, Count of Cavour, the Austrians were driven out (1859–66) and all Italy was united (1870) under the rule of one king interested in promoting the welfare of his people.

Sardinia leads to national organization and control. The movement to free Italy was essentially a liberal movement. Many hoped to create a republic, but chose a liberal constitutional monarchy under Victor Emmanuel as the most feasible plan. Cavour *understood* the importance of public instruction, and from the

first began to build up schools[1] and put them under state control. In 1844, a normal school was opened in Turin. In 1847, a Minister of Public Instruction was appointed and a Council of Public Instruction created, after the plan of France. In 1848, a General School Law was enacted, and the organization and improvement of schools was begun with a will. In 1850, a commission was sent to study the school systems of Europe, and in particular those of France and of the German States. A Supreme Council of Public Instruction was now formed for Sardinia, and the process of creating primary schools, higher-primary schools, classical and technical secondary schools, colleges, and the reorganization of the universities was begun. In 1859, when the growth of Italian unity was rapidly extending the rule of Victor Emmanuel,[2] a new law, providing a still better state organization of public instruction, was enacted. A Minister of Public Instruction appointed by the King, a Supreme Council of Public Instruction, and a Department of Public Instruction as a branch of the government, were all provided for, after the French plan.



FIG. 180
COUNT OF CAVOUR
(1810–61)

This Law of 1859 was later extended to cover all Italy, and has formed the basis for all subsequent legislation. It clearly established a state system of education, though the religious schools were allowed to remain. It also established control after the French plan, with a high degree of centralization and uniformity. The schools established, too, were much after the French type, though much less extensive in scope. The primary and superior-primary at first were but two years each, though since extended in all the larger communities to a six-year combined course. The two-class school system was established, as in France and German lands. The secondary-school system consisted of a five-year *ginnasio*, established in many places (218 in Italy by 1865; 458 by

[1] Not only were schools built up, but commerce, roads, and in particular scientific agriculture were subjects of deep interest to Cavour. He saw, very clearly, that if Sardinia was to be the nucleus of a future Italy, Sardinia must show unmistakably her worthiness to lead.

[2] By 1859 Sardinia had come to include Savoy and Lombardy, and was the largest State in northern Italy. A year later all but Venetia and the States of the Church had been added.

1916) with a three-year *liceo* following, but found in a smaller number of places. Parallel with this a seven-year non-classical scientific and technical secondary school was also created, and these institutions have made marked headway (461 by 1916) in central and northern Italy. Pupils may pass to either of these on the completion of the ordinary four-year primary course, at the age of ten. Above the secondary schools are numerous universities. The normal-school system created prepared for teaching in the primary schools, while the university system followed the completion of the *liceo* course.

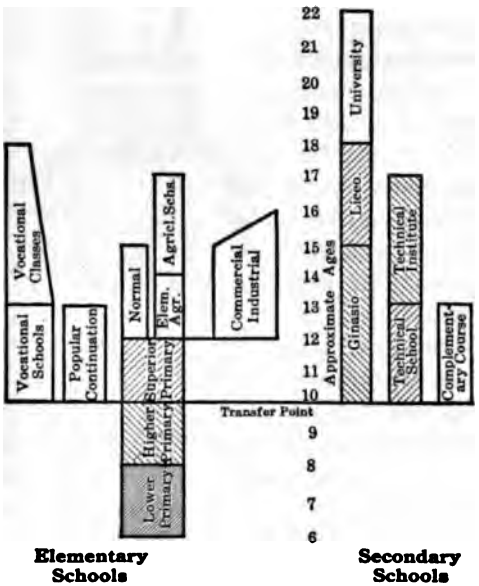


FIG. 181. OUTLINE OF THE MAIN FEATURES OF THE ITALIAN STATE SCHOOL SYSTEM

The influence of French ideas in Italian educational organization is clearly evident. Before the French armies brought French governmental ideas and organization to Italy almost nothing had been done. Then, during the first six decades of the nineteenth century, the transition from the church-school idea to the conception of education as an important function of the State was made, and the resulting system is largely French in organization and form.

Subsequent progress. From this point on educational progress has been chiefly a problem of increased finances and the slow but gradual extension of educational opportunities to more and more of the children of the people. The church schools have been allowed to continue side by side with the state schools, and the problem of securing satisfactory working relations has not always been easy of solution.

In 1877 primary education[1] was ordered made compulsory,

[1] The Law of 1877 fixed the instruction in the primary schools, for the three com-

and religious instruction was dropped from the state schools, but the slow progress of the nation in extending literacy indicates that but little had been accomplished in enforcing the compulsion previous to the new compulsory law of 1904. This made more stringent provisions regarding schooling, and provided for three thousand evening and Sunday schools for illiterate adults. In 1906, an earnest effort was begun to extend educational advantages in the southern provinces, where illiteracy has always been highest. In 1911, the state aid for elementary education was materially increased. In 1912, a new and more modern plan of studies for the secondary schools was promulgated. Since 1912 many important advances have been inaugurated, such as elementary schools of agriculture, vocational schools, continuation schools, the middle-class industrial and commercial schools. The World War directed new attention to the educational needs of the nation. Italy, at last thoroughly awakened, seems destined to be a great world power politically and commercially, and we may look forward to seeing education used by the Italian State as a great constructive force for the advancement of its national interests.

QUESTIONS FOR DISCUSSION

1. Show how the Revolution marked out the lines of future educational evolution for France.
2. Explain why France and Italy evolved a school system so much more centralized than did other European nations.
3. Explain Napoleon's lack of interest in primary education, in view of the needs of France in his day.
4. Show that Napoleon was right, time and circumstances considered, in placing the state emphasis on the types of education he favored.
5. Explain why middle-class education should have received such special attention in Cousin's Report, and in the Law of 1833.
6. Was the course of instruction provided for the primary schools in 1833, times and needs considered, a liberal one, or otherwise? Why?
7. Compare the 1833 and the 1850 courses.
8. Explain why all forms of education in France should have experienced such a marked expansion and development after 1875.
9. Explain why great military disasters, for the past 150 years, have nearly always resulted in national educational reorganization.
10. Appraise the work and the permanent influence of Napoleon.
11. Explain Napoleon's interest in establishing schools and universities, when the Austrian and Church authorities were so interested in abolishing what he had created.
12. What did the dropping of religious instruction from the primary schools of both France and Italy, both strong Catholic countries, indicate as to national development?

pulsory years, as reading, writing, the Italian language, elements of civics, arithmetic, and the metric system. The omission of religious instruction excited much opposition from church authorities, but without effect.

SELECTED READINGS

In the accompanying *Book of Readings* the following selections are reproduced:

282. Le Brun: Founding of the School of Arts and Trades.
283. Jourdain: Refounding of the Superior Normal School.
284. Cousin: Recommendations for Education in France.
285. Guizot: Address on the Law of 1833.
286. Guizot: Principles underlying the Law of 1833.
287. Guizot: Letter to the Primary Teachers of France.
288. Arnold: Guizot's Work as Minister of Public Instruction.
289. Quinet: A Lay School for a Lay Society.
290. Ferry: Moral and Civic Instruction replaces the Religious.

QUESTIONS ON THE READINGS

1. Just what attitude toward education did the action of Napoleon in changing the character of the school at Compiègne (**282**) express?
2. What type of school (**283**) was the re-created Superior Normal?
3. Just what did Victor Cousin recommend (**284**) as to (*a*) schools to be created; (*b*) control and administration; (*c*) compulsory attendance: (*d*) schools for the middle classes; and (*e*) education and control of teachers?
4. Was Guizot's Law of 1833 (**285**) in harmony with the recommendations of Cousin (**284**)?
5. Why have public opinion and legislative action, in France and elsewhere, so completely reversed the positions taken by Guizot and his advisers (**286**) in framing the Law of 1833?
6. From Guizot's letter to the teachers of France (**287**), and Arnold's description of his work (**288**), just what do you infer to have been the nature of his interest in advancing primary education in France?
7. Contrast the reasoning of Guizot (**286**) and Quinet (**289**) on lay instruction. Of the reasoning of the two men, which is now accepted in France and the United States?
8. Contrast the letters of Guizot (**287**) and Ferry (**290**) to the primary teachers of France.

SUPPLEMENTARY REFERENCES

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CHAPTER XXIV

THE STRUGGLE FOR NATIONAL ORGANIZATION IN ENGLAND

I. THE CHARITABLE-VOLUNTARY BEGINNINGS

English progress a slow but peaceful evolution. The beginnings of national educational organization in England were neither so simple nor so easy as in the other lands we have described. So far this was in part due to the long-established idea, on the part of the small ruling class, that education was no business of the State; in part to the deeply ingrained conception as to the religious purpose of all instruction; in part to the fact that the controlling upper classes had for long been in possession of an educational system which rendered satisfactory service in preparing leaders for both Church and State; and in part — probably in large part — to the fact that national evolution in England, since the time of the Civil War (1642–49) has been a slow and peaceful growth, though accompanied by much hard thinking and vigorous parliamentary fighting. Since the Reformation (1534–39) and the Puritan uprising led by Cromwell (1642–49), no civil strife has convulsed the land, destroyed old institutions, and forced rapid changes in old established practices. Neither has the country been in danger from foreign invasion since that memorable week in July, 1588, when Drake destroyed the Spanish Armada and made the future of England as a world power secure.

English educational evolution has in consequence been slow, and changes and progress have come only in response to much pressure, and usually as a reluctant concession to avoid more serious trouble. A strong English characteristic has been the ability to argue rather than fight out questions of national policy; to exhibit marked tolerance of the opinions of others during the discussion; and finally to recognize enough of the proponents' point of view to be willing to make concessions sufficient to arrive at an agreement. This has resulted in a slow but a peaceful evolution, and this slow and peaceful evolution has for long been the dominant characteristic of the political, social, and educational progress of the English people. The whole history of

the two centuries of evolution toward a national system of education is a splendid illustration of this essentially English characteristic.

Eighteenth-century educational efforts. England, it will be remembered (chapter XIX, § III), had early made marked progress in both political and religious liberty. Ahead of any other people we find there the beginnings of democratic liberty, popular enlightenment, freedom of the press, religious toleration,[1] social reform, and scientific and industrial progress. All these influences awakened in England, earlier than in any other European nation, a rather general desire to be able to read (**R. 170**), and by the opening of the eighteenth century we find the beginnings of a charitable and philanthropic movement on the part of the churches and the upper classes to extend a knowledge of the elements of learning to the poorer classes of the population.

As a result, as we have seen (chapter XVIII), the eighteenth century in England, educationally, was characterized by a new attitude toward the educational problem and a marked extension of educational opportunity. Even before the beginning of the century the courts had taken a new attitude toward church control of teaching,[2] and in 1700 had freed the teacher of the elementary school from control by the bishops through license.[3] In 1714 an Act of Parliament (13 Anne, c. 7) exempted elementary schools from the penalties of conformity legislation, and they were thereafter free to multiply and their teachers to teach.[4] The dame school (**R. 235**) now became an established English institution (p. 447). Private-adventure schools of a number of types arose (p. 451). The churches here and there began to provide elementary parish-schools for the children of their poorer mem-

[1] Prussia and Holland possibly form exceptions in the matter. Frederick the Great (p. 474) was noted for his liberality in religious matters. There different varieties of Protestants, Catholics, and Jews were all tolerated, and there they mingled and intermarried. So well were the Jews received that the type — German-Jew — is to-day familiar to the world.

[2] As early as 1670, in the celebrated Bates case, the English court held that a teacher could not be dispossessed from his school for teaching without the Bishop's license, if he were the nominee of the founder or patron. This led (p. 438) to a great increase in endowed schools.

[3] In the Cox case (1700), another important legal decision, the English court held that there was not and never had been any ecclesiastical control over any schools other than grammar schools, and that teachers in elementary schools did not need to have a license from the Bishop. The year following, in the case of *Rex* v. *Douse*, the same principle was affirmed in even clearer language.

[4] It was not until 1779 that an Act (19 Geo. III, c. 44) granted full freedom to Dissenters to teach. In 1791 a supplemental Act (31 Geo. III, c. 32, s. 13–14) granted similar liberty to Roman Catholics.

bers (p. 449), or training-schools for other children who were to go out to service (**R. 241**). Workhouse schools and "schools of industry" also were used to provide for orphans and the children of paupers (p. 453).

The Charity-School system. Most important of all was the organization, by groups of individuals (**R. 237**) and by Societies (S.P.C.K.; p. 449) formed for the purpose, and maintained by subscription (**R. 240**), collections (**R. 291**), and foundation incomes, of an extensive and well-organized system of Charity-Schools (p. 449). The "Society for the Promotion of Christian Knowledge" dates from the year 1699, and the "Society for the Propagation of the Gospel in Foreign Parts" from 1701. The first worked at home, and the second in the overseas colonies.[1] Both did much to provide schools for poor boys and girls, furnishing them with clothing and instruction (**R. 292**), and training them in reading, writing, spelling, counting, cleanliness, proper behavior, sewing and knitting (girls), and in "the Rules and Principles of the Christian Religion as professed and taught in the Church of England" (**R. 238 b**). The Charity-School idea was in a sense an application of the joint-stock-company principle to the organization and maintenance of an extensive system of schools for the education of the children of the poor, the stock being subscribed for by humanitarian-minded people. The upper classes had for long been well provided, through tutors in the home and grammar schools and colleges, with those means for education which have for centuries produced an able succession of gentlemen, statesmen, governors, and scholars for England, and many of the commercial middle-class had, by the eighteenth century, become able to purchase similar advantages for their sons. These now united to provide, as part of a great organized charity and under carefully selected teachers (**R. 238 a**), for the more promising children of their poorer neighbors, the elements of that education which they themselves had enjoyed.

The movement spread rapidly over England (p. 451), and soon developed into a great national effort to raise the level of intelligence of the masses of the English people. Thousands of persons gave their services as directors, organizers, and teachers. Traveling superintendents were employed. A rudimentary form of teacher-training was begun. The preaching of a Charity Sermon

[1] It was this second Society that did notable work in the Anglican Colonies of America, and particularly in and about New York City (p. 369). See Kemp, W. W., *Support of Schools in Colonial New York by the S.P.G.* (New York, 1913.)

each year,[1] with a special collection, became a general English practice.

The Voluntary System. The rise of the Methodist movement,[2] after 1730 (p. 489); the earthquake shocks of 1750; the rise of the popular novel and newspaper; the printing of political news, and cheap scientific pamphlets (p. 492); and the growing tendency to debate questions and to apply reason to their solution — all tended to give emphasis in England to these eighteenth-century charitable means for extending education to the children of those who could not afford to pay for it. Unlike the German States, where the State and the Church and the school had all worked together from the days of the Reformation on, the English had never known such a conception. The efforts, though, of the educated few, in the eighteenth and early nineteenth centuries, to extend the elements of learning, order, piety, cleanliness, and proper behavior to the children of the masses, formed an important substitute for the action by the Church-State which was so characteristic a feature of Teutonic lands.

We see in these eighteenth-century efforts the origin of what became known in England as "the voluntary system," and upon this voluntary support of education — private, parochial, charitable — the English people for long relied. Of action by the State there was none during the eighteenth century, aside from an Act of 1767 (7 Geo. III, c. 39) relating to the education of pauper children. This established the important principle — unfortunately not followed up — of providing that poor parish children of London might be maintained and educated "at the cost of the rates."

The Sunday-School movement. One other voluntary eighteenth-century movement of importance in the history of English educational development should be mentioned here, as it formed the connecting link between the parochial-charity-school move-

[1] Begun, in 1704, in London, these were continued yearly there until 1877. They were also preached for more than a century in many other places. To these sermons the children marched in procession, wearing their uniforms, and a collection for the support of the schools was taken. Of the first of these occasions in London, Strype, in his edition of Stow, says: "It was a wondrous surprising, as well as a pleasing sight, that happened June the 8th, 1704, when all the boys and girls maintained at these schools, in their habits, walked two and two, with their Masters and Mistresses, some from Westminster, and some through London; with many of the Parish ministers going before them; and all meeting at Saint Andrews', Holburn, Church, where a seasonable sermon was preached . . . upon Genesis xviii, 19, *I know him that he will command his children*, etc., the children (about 2000) being placed in the galleries."

[2] "The religious revival under Wesley owed, perhaps, more than is generally suspected to the Christian teaching in these new and humble elementary schools." (Montmorency, J. E. G. de, *The Progress of Education in England*, p. 54.)

ment of the eighteenth century and the philanthropic period of the educational reformers of the early nineteenth. This was the Sunday-School movement, first tried by John Wesley in Savannah, in 1737, but not introduced into England until 1763. The idea amounted to little, though, until practically worked out anew (1780) by Robert Raikes, a printer of Gloucester, and described by him (1783) in his *Gloucester Journal* (**R. 293**), after he had experimented with it for three years.[1] His printed description of the Sunday-School idea gave a national impulse to the movement, and Sunday Schools were soon established all over England to take children off the streets on Sunday and provide them with some form of secular and religious instruction.[2]

The movement coincided with new religious, social, and economic forces which were at work, and which awakened an interest not only in the education of the children of the poorer working-classes, but caused the upper and middle classes in society to feel a new sense of responsibility for social and educational reform. The cold and unemotional religion of the English Church in the early eighteenth century had created an indifference to the simple truths and duties of the Gospels. The great religious revival under Wesley and Whitefield had challenged such an attitude, and had done much to infuse a new spirit into religion and awaken a new sense of responsibility for social welfare. The rapid growth of population in the towns, following the beginnings of factory life (p. 493), had created new social and economic problems, and the neglect of children in the manufacturing towns had shocked many thinking persons. The way in which parents and children, freed from hard labor in the factories on Sundays, abandoned themselves to vice, drunkenness, and profanity caused many, among them Raikes himself (**R. 293**), to inquire if "something could not be done" to turn into respectable men and women "the little heathen of the neighborhood." The Sunday School was his answer, and the answer of many all over England.[3]

[1] He gathered together the children (90 at first) employed in the pin factories of Gloucester, and paid four women a shilling each to spend their Sundays in instructing these poor children "in reading and the Church Catechism."

[2] Sunday being a day of rest and the mills and factories closed, the children ran the streets and spent the day in mischief and vice. In the agricultural districts of England farmers were forced to take special precautions on Sundays to protect their places and crops from the depredations of juvenile offenders.

[3] "In a very special way they met the sentiment of the times. They were cheap — many were conducted by purely voluntary teachers — they did not teach too much, and they had the further merit of not interfering with the work of the week." (Birchenough, C., *History of Elementary Education in England and Wales*, p. 40.)

In 1785 "The Society for the Support and Encouragement of Sunday Schools in the different Counties of England" was formed with a view to establishing a Sunday School in every parish in the kingdom, and the Queen headed a subscription list, following a general appeal for funds. By 1787 it was estimated that 234,000 children in England and Wales were attending a Sunday School, and by 1792 the number had increased to half a million. The Parliamentary return for 1818 showed 5463 Sunday Schools in existence, and 477,225 scholars; in 1835 the returns showed 1,548,890 scholars, half of whom attended no other school, and approximately 160,000 voluntary teachers.[1] In Manchester, then a city scourged with almost universal child-labor, the schools (1834) were in session five and a half hours on Sunday and two evenings a week. The moral and religious influence of these schools was important, and the instruction in reading and writing, meager as it was, filled a real need of the time.



FIG. 182. A RAGGED-SCHOOL PUPIL
(From a photograph of a boy on entering the school; later changed into a respectable tradesman. From Guthrie)

Other voluntary schools; "Ragged Schools." The Charity Schools and the Sunday Schools were the two most conspicuous of the voluntary-organization type of undertakings for providing the poor children of England with the elements of secular and religious education. Many other organizations of an educational and charitable nature, aided also by many individual efforts, too numerous to mention, were formed with the same charitable and humanitarian end in view. Others, similar in type, charged a small fee, and hence were of the private-adventure type. Sunday Schools, day schools, evening schools, children's churches, bands of hope, clothing clubs, messenger brigades, shoeblack brigades, orphans' schools, reformatory schools, industrial schools, ragged schools — these were some of the types that arose. Only one of these — "Ragged Schools" — will be described.

[1] In a Manchester Sunday School, in 1834, there were 2700 scholars and 120 unsalaried teachers, all but two or three of whom were former pupils in the Sunday Schools, now teaching others, free of charge, in return for the advantages once given them.



PLATE 15. JOHN POUNDS'S RAGGED SCHOOL AT PORTSMOUTH



PLATE 16. AN ENGLISH VILLAGE VOLUNTARY SCHOOL

(Reproduced from an early nineteenth-century engraving, through the courtesy of William G. Bruce)



The originator of the "Ragged Schools" — schools for the education of destitute children, waifs and strays not reached by other agencies — was a large-hearted cobbler of Portsmouth, by the name of John Pounds (1766–1839), who divided his time between cobbling and rescue work among the poorest and most degraded children of his neighborhood. His school is shown in the picture facing this page. (Plate 15.) In his shoeshop he taught such children, free of charge, to read, write, count, cook their food, and mend their shoes. He was a schoolmaster, doctor, nurse, and playfellow to them all in one. His workshop was a room of only six by eighteen feet, yet in it he often had forty children under his instruction. His work set an example, and "Ragged Schools," or "Schools for the Destitute," began to be formed in many places by humanitarians. These took the form of day schools, night schools, Sunday Schools, and the so-called industrial schools (**R. 294**). The instruction in most of them was entirely free,[1] but some charged a small fee, in a few cases as high as a shilling a month. It was one of these schools that Crabbe described when he wrote: [2]

> Poor Reuben Dixon has the noisiest school
> Of ragged lads, who ever bowed to rule;
> Low in his price — the men who heave our coals,
> And clean our causeways, send him boys in shoals.
> To see poor Reuben, with his fry beside —
> Their half-check'd rudeness and his half-scorned pride —
> Their room, the sty in which th' assembly meet,
> In the close lane behind the Northgate street;
> T' observe his vain attempts to keep the peace,
> Till tolls the bell, and strife and trouble cease,
> Calls for our praise; his labours praise deserves,
> But not our pity; Reuben has no nerves.
> 'Mid noise and dirt, and stench, and play, and prate,
> He calmly cuts the pen or views the slate.

In 1844 "The Ragged School Union" was formed in London, and maintained there many of the types of schools mentioned above. The "Constitution and Rules of the Association for the Establishment of Ragged Industrial Schools for Destitute Children in Edinburgh" (**R. 294**) gives a good idea as to the nature,

[1] "The amount of instruction rarely, if ever, exceeds the first four rules of arithmetic, with reading and writing. The class of children instructed is presumed to be of the very poorest, living in the most crowded districts. No doubt a large number come under this designation, but not a few better-to-do persons are found ready to take advantage for their children of the free instruction thus held out to them, and even at times almost pressed upon them." (Bartley, George C. T., *The Schools for the People*, p. 385.)

[2] The Reverend George Crabbe (1754–1832). "The schools of the Borough."

support, and instruction in such schools. As late as 1870, when national education was first begun in England, there were about two hundred of these Ragged Schools in London alone, with about 23,000 children in them. Upon many such forms of irregular schools England depended before the days of national organization.

Other eighteenth-century influences. During the latter half of the eighteenth century French Revolutionary thought [1] and American political action began to exert some influence on public opinion in England. The small upper ruling class, alarmed at the developments in France, became confirmed in its opposition to any general popular education aside from a little reading, writing, counting, and careful religious training, while on the other hand men of more liberal outlook felt that popular enlightenment was a necessity to prevent the masses from becoming stirred by inflammatory writings and speeches. The increasing distress in the agricultural regions, due to the rapid change of England from an agricultural to a manufacturing nation; the crowding of great numbers of working people into the manufacturing towns; and the social misery and political unrest following the Napoleonic wars all alike contributed to a feeling of need for any form of philanthropic effort that gave promise of alleviating the ills of society. There now grew up a small but influential body of thinkers who favored the maintenance of a system of general and compulsory education by the State, and the separation of the school from the Church. The most notable proponents of this new theory were Adam Smith, the Reverend T. R. Malthus, and the Anglo-American Thomas Paine. The first approached the question from an economic point of view, the second from an economic and biologic, and the third from the political.

In 1776 Adam Smith's *Wealth of Nations* appeared. This was one of the great books of all time. Among other matters he dealt with the question of education. He pointed out that English society was now becoming highly organized; that the new manufacturing life had completely changed the simple conditions of an earlier agricultural society; that in the narrow round of manufac-

[1] French Revolutionary thought "represented an attack on over-interference, vested interests, superstition, and tyranny of every form. It showed a marked propensity to ignore history, and to judge everything by its immediate reasonableness. It pictured a society free from all laws and coercion, freed from all clerical influence and ruled by benevolence, a society in which all men had equal rights and were able to attain the fullest self-realization. In its strictly educational aspects, it demanded the withdrawal of education from the Church and the setting up of a state system of secular instruction." (Birchenough, C., *History of Elementary Education in England and Wales*, p. 20.)

turing duties and town life people tended to lose their inventiveness and to stagnate; and that the individual degeneracy which set in in a more highly organized type of society became a social danger of large magnitude. Hence, he argued (**R. 295**), it was a matter of state interest that "the inferior ranks of the people" be instructed to make them socially useful and to render them "less apt to be misled into any wanton or unnecessary opposition to measures of government." Accordingly, he held, the State had every right, not only to take over elementary education as a state function and a public charge, but also to make it free and compulsory.



FIG. 183. ADAM SMITH (1723–90)

In 1798 the Reverend T. R. Malthus's *Essay on Population* appeared. This was a precursor of the work of Darwin, and another of the great books of all time. He pointed out that population everywhere tended to outrun the means of subsistence, and that it was only prevented from doing so by preventive checks which involved much misery and vice and pauperism. To prevent pauperism each individual must exercise moral restraint and foresight, and to enable all to do this a widespread system of public instruction was a necessity (**R. 296**). The money England had spent in poor-relief he regarded as largely wasted, because it afforded no cure. In the general education of a people the real solution lay. He said:



FIG. 184
REV. T. R. MALTHUS
(1766–1834)

> We have lavished immense sums on the poor, which we have every reason to think have constantly tended to aggravate their misery, . . . It is surely a great national disgrace that the education of the lowest classes in England should be left to a few Sunday Schools, supported by a subscription from individuals, who can give to the course of instruction in them any kind of bias which they may please. (**R 296.**)

Agreeing thoroughly with Adam Smith that a general diffusion of knowledge was a safeguard to society, he urged the teaching of the

elements of political economy in the common schools to enable people to live better in the new type of competitive society.[1]

In 1791–92 Thomas Paine published his widely read *Rights of Man*. He expressed the French Revolutionary political theory, holding that government, while capable of great good were its powers only properly exercised, was, as organized, an evil. In a well-governed nation none would be permitted to go uninstructed, he held, and he would cut off poor-relief and make a state grant of £4 a year for every child under fourteen for its education, and would compel parents to send all children to school to learn reading, writing, and arithmetic.

Each of these three books had a long and a slowly cumulative influence, and a small number of young and powerful champions of the idea of popular education as a public charge began, early in the nineteenth century, to urge action and to influence public opinion.

II. THE PERIOD OF PHILANTHROPIC EFFORT (1800–33)

Conditions at the beginning of the nineteenth century. This second period in the history of the organization of English education begins with the publication, in 1797, of Dr. Andrew Bell's *An Experiment in Education*, describing his work in educating large numbers of children by means of the so-called mutual system, at the Male Asylum at Madras, India. The period properly ends with the first Parliamentary grant for education, in 1833. In its main characteristics it belongs to the eighteenth rather than to the nineteenth century, as the prominent educational movements of the eighteenth (charity-schools, Sunday Schools, schools of industry) continue strong throughout the period, and many new undertakings of a similar charitable nature ("Ragged Schools"; associations for the improvement of the condition of the poor, etc.) were begun.

The period — during and after the Napoleonic wars — was one of marked social and political unrest, and of corresponding emphasis on social and philanthropic service. The masses were discontented with their lot, and were beginning to be with their lack

[1] The ideas of Malthus were especially offensive to his brother clergymen, and created quite a furor. Many regarded him as an insane and unorthodox fanatic. A prevailing idea of the time was that of a "beautiful order Providentially arranged," and it was the custom to give everything a rose-colored hue. The poor were thought to be contented in their poverty, and the rich and the aristocratic considered themselves divinely appointed to rule over them. Malthus saw the fallacy of such *thinking*, and stated matters in the light of biologic and political truths.

of political privileges. Numerous plans to quiet the unrest and improve conditions were proposed, of which schemes to increase employment (industrial schools; evening schools), to encourage thrift (savings banks; children's brigades), and to spread an elementary and religious education (mutual schools; infant schools) that would train the poor in self-help were the most prominent. "The Society for Bettering the Condition and Increasing the Comforts of the Poor," founded in 1796, became a very important early-nineteenth-century institution. Branches were established all over England. Soup-kitchens, clothing-stations, savings banks, and schools were among the chief lines of activity. In particular it extended and improved Sunday Schools, encouraged the formation of charity-schools and schools of industry, and later gave much aid in establishing the new monitorial schools. Educational interest steadily strengthened during the period, though as yet along lines that were deemed relatively harmless, were inexpensive, and were largely religious in character.

The eighteenth-century conception of education as a charity, designed where given to train the poor to "an honest, upright, grateful, and industrious poverty," still prevailed; there was as yet little thought of education as designed to train the poor to think for and help themselves. The eighteenth-century conception of the educational process, too, which regarded education as something external and determined by adult standards and needs, and to be imposed on the child from without, also continued. The purpose of the school was to manufacture the standard man, and the business of the teacher was to so organize and methodize instruction that the necessary knowledge could be acquired as economically, from a financial point of view, as possible. The Pestalozzian conception of education as a development of the individual, according to the law of his own nature, found but slow acceptance in England. Mental development, scientific instruction, the habit of thinking, the exercise of judgment, and free and enlightened opinion were ideas that found little favor there, and hence had to be handled carefully by those who had caught the new conception of the educational process.

In the political reaction following the end of Napoleon's rule the upper and ruling classes of England, in common with those of continental lands, became exceedingly suspicious of much education for the masses. To secure contributions for schools it became necessary "to avow and plead how little it was that the

schools pretended or presumed to teach." [1] England now experienced a great development of manufacturing and commerce, a great material prosperity ensued, and the growing demand for education was met by a counter-demand that the education provided should be systematized, economical, and should not teach too much. Such a system of training was now discovered and applied, in the form of mutual or monitorial instruction, and was hailed as "a new expedient, parallel and rival to the modern inventions in the mechanical departments."

Origin of mutual or monitorial instruction. In 1797 Dr. Andrew Bell, a clergyman in the Established Church, published the



REV. ANDREW BELL (1753–1832) JOSEPH LANCASTER (1778–1838)

FIG. 185. THE CREATORS OF THE MONITORIAL SYSTEM

results of his experiment in the use of monitors in India.[2] The idea attracted attention, and the plan was successfully introduced into a number of charity-schools. About the same time (1798) a young Quaker schoolmaster, Joseph Lancaster by name, was led independently to a similar discovery of the advantages of using monitors, by reason of his needing assistance in his school and being too poor to pay for additional teachers. In 1803 he published an account of his plan.[3] The two plans were quite similar,

[1] Foster, John, *An Essay on the Evils of Popular Ignorance*, p. 259.

[2] Bell, Reverend Dr. Andrew, *An Experiment in Education made at the Male Asylum at Madras, Suggesting a System by which a School or a Family may teach itself under the Superintendence of the Master or Parent.* London, 1797.

[3] Lancaster, Joseph, *Improvements in Education as it Respects the Industrial Classes of the Community.* London, 1803; New York, 1807.

attracted attention from the first, and schools formed after one or the other of the plans were soon organized all over England.

Increased attention was attracted to the new plans by a bitter church quarrel which broke out as to who was the real originator of the idea,[1] Bell being upheld by Church-of-England supporters, and Lancaster by the Dissenters. In 1808 "The Royal Lancastrian Institution" was formed, which in 1814 became "The British and Foreign School Society," to promote Lancastrian schools. This society had the close support of King George III, the Whigs, and the *Edinburgh Review*, while such liberals as Brougham, Whitbread, and James Mill were on its board of directors. This Society sent out Lancaster to expound his "truly British" system, and by 1810 as many as ninety-five Lancastrian schools had been established in England. His model school in Borough Road, Southwark, which became a training-school for teachers, is shown on the following page. Lancaster was a poor manager; became involved in financial difficulties; and in 1818 left for the United States, where he spent the remainder of his life in organizing such schools and expounding his system. For a time this attracted wide attention, as we shall point out in the following chapter.

Lancaster's work stimulated the Church of England into activity, and in 1811 "The National Society for Promoting the Education of the Poor in the Principles of the Established Church throughout England and Wales" was formed by prominent S.P.C.K. (p. 449) members and Churchmen, with the Archbishop of Canterbury as president. This Society was supported by the Tories, the Established Church, and the *Quarterly Review*, and was formed to promote the Bell system,[2] "which made religious instruction an essential and necessary part of the plan." Within a month £15,000 had been subscribed to establish schools. Among many other contributions were £500 each from the universities of Oxford and Cambridge. A training-school for teachers was organized; district societies were formed over England to establish schools; and a system of organized aid was extended for both buildings and maintenance. By 1831 there were 900,412

[1] Both Bell and Lancaster worked with great energy to organize schools after their respective plans, and quarreled with equal energy as to who originated the idea. While both probably did, the idea nevertheless is older than either. In 1790 Chevalier Paulet organized a monitorial school in Paris; while the English schoolmaster, John Brinsley (1587–1665), in his *Ludus Literarius, or the Grammar Schooles* (1612), laid down the monitorial principle in explicit language.

[2] This Society adopted, as a fundamental principle, "that the national religion should be made the foundation of national education, and according to the excellent liturgy and catechism adopted by our Church for that purpose."

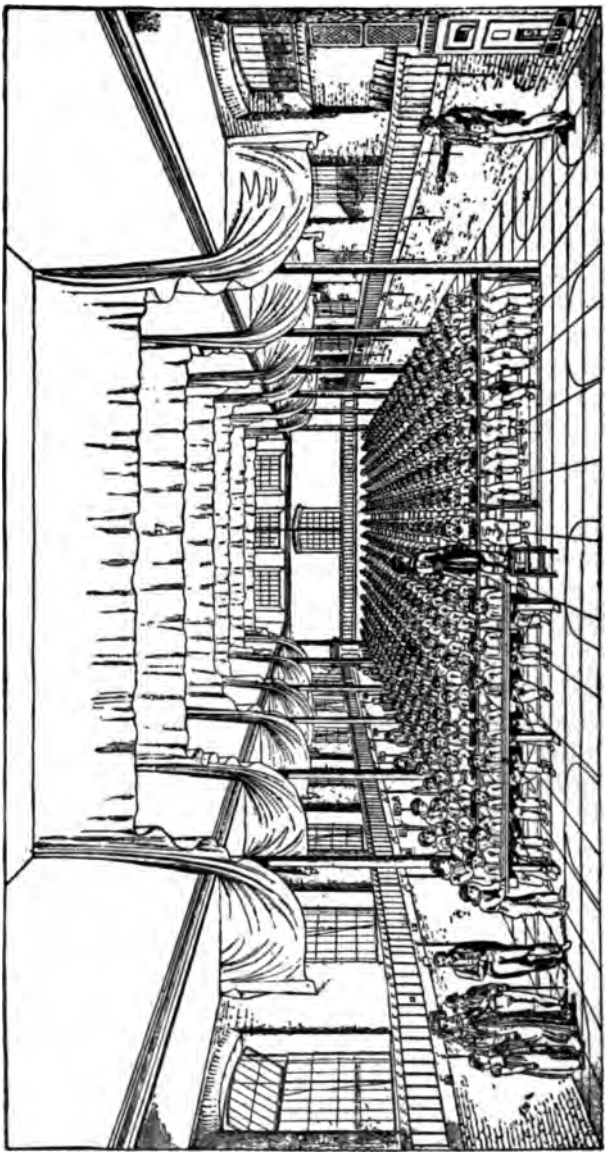


FIG. 186. THE LANCASTRIAN MODEL SCHOOL IN BOROUGH ROAD, SOUTHWARK, LONDON
This shows 365 pupils, seated for writing. The room was 40 x 90 feet in size, and contained 20 desks, each 25 feet long. The boys of each row were divided into two "drafts" of from eight to ten, each in charge of a monitor. Around the wall were 31 "stations," indicated by the semicircles on the floor.

children receiving instruction in the monitorial schools of the National Society alone.

The mutual instruction idea spread to other lands — France, *Belgium*, Holland, Denmark — and seems to have been tried

even in German lands. In France and Belgium it was experimented with for a time because of its cheapness, but was soon discarded because of its defects. In Teutonic lands, where the much better Pestalozzian ideas had become established, the monitorial system made practically no headway. It was in the United States, of all countries outside of England, that the idea met with most ready acceptance.

The system of mutual or monitorial instruction. The great merit, aside from being cheap, of the mutual or monitorial system of instruction lay in that it represented a marked advance in school organization over the older individual method of instruction, with its accompanying waste of time and schoolroom disorder. Under the individual method only a small number of pupils could be placed under the control of one teacher, and the expense for such instruction made general education almost prohibitive. Pestalozzi, to be sure, had worked out in Switzerland the modern class-system of instruction, and following developmental lines in teaching, but of this the English were not only ignorant, but it called for a degree of pedagogical skill which their teachers did not then possess. Bell and Lancaster now evolved a plan whereby one teacher, assisted by a number of the brighter



FIG. 187. MONITORS TEACHING READING AT "STATIONS"
Three "drafts" of ten each, with their toes to the semicircles painted on the floor, are being taught by monitors from lessons suspended on the wall.

pupils whom they designated as monitors, could teach from two hundred to a thousand pupils in one school (**R. 297**). The picture of Lancaster's London school (Figure 186) shows 365 pupils seated.[1] The pupils were sorted into rows, and to each row was

[1] "When Lancaster had his famous interview with King George III, that monarch was impressed, as he naturally might be, by the statement that one master 'could teach five hundred children at the same time.' 'Good,' said the King; 'Good,' echoed a number of wealthy subscribers to Lancaster's projects." (Binns, H. B., *A Century of Education*, p. 299.)

assigned a clever boy (monitor) to act as an assistant teacher. A common number for each monitor to look after was ten. The teacher first taught these monitors a lesson from a printed card, and then each monitor took his row to a "station" about the wall and proceeded to teach the other boys what he had just learned. At first used only for teaching reading and the Catechism, the plan was soon extended to the teaching of writing, arithmetic, and spelling, and later on to instruction in higher branches. The system was very popular from about 1810 to 1830, but by 1840 its popularity had waned.

Such schools were naturally highly organized, the organization being largely mechanical (**R. 298**). Lancaster, in particular, was

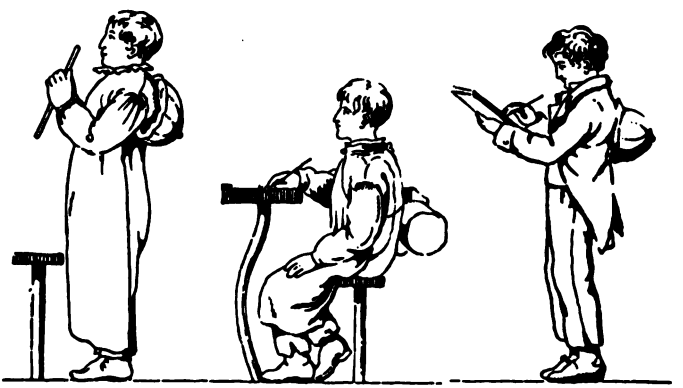


FIG. 188. PROPER MONITORIAL-SCHOOL POSITIONS
(From an engraved plate of 30 positions, in a Manual of the British and Foreign School Society, London, 1831)

an organizing genius. The *Manuals of Instruction* gave complete directions for the organization and management of monitorial schools, the details of recitation work, use of apparatus, order, position of pupils at their work, and classification being minutely laid down. By carefully studying and following these directions any reasonably intelligent person could soon learn to become a successful teacher in a monitorial school.

The schools, mechanical as they now seem, marked a great improvement over the individual method upon which schoolmasters for centuries had wasted so much of their own and their pupils' time. In place of earlier idleness, inattention, and disorder, Bell and Lancaster introduced activity, emulation, order, and a kind of military discipline which was of much value to the type of

children attending these schools. Lancaster's biographer, Salmon, has written of the system that so thoroughly was the instruction worked out that the teacher had only to organize, oversee, reward, punish, and inspire:

When a child was admitted a monitor assigned him his class; while he remained, a monitor taught him (with nine other pupils); when he was absent, one monitor ascertained the fact, and another found out the reason; a monitor examined him periodically, and, when he made progress, a monitor promoted him; a monitor ruled the writing paper; a monitor had charge of slates and books; and a monitor-general looked after all the other monitors. Every monitor wore a leather ticket, gilded and lettered, "Monitor of the First Class," "Reading Monitor of the Second Class," etc.

Value of the system in awakening interest. The monitorial system of instruction, coming at the time it did, exerted a very important influence in awakening interest in and a sentiment for schools. It increased the number of people who possessed the elements of an education; made schools much more talked about; and aroused thought and provoked discussion on the question of education. It did much toward making people see the advantages of a certain amount of schooling, and be willing to contribute to its support. Under the plans previously in use education had been a slow and an expensive process, because it had to be carried on by the individual method of instruction, and in quite small groups. Under this new plan it was now possible for one teacher to instruct 300, 400, 500, or more pupils in a single room, and to do it with much better results in both learning and discipline than the old type of schoolmaster had achieved.

All at once, comparatively, a new system had been introduced which not only improved and popularized, but tremendously cheapened education.[1] Lancaster, in his *Improvements in Education*, gave the annual cost of schooling under his system as only seven shillings sixpence ($1.80) per pupil, and this was later decreased to four shillings fivepence ($1.06) as the school was increased to accommodate a thousand pupils. Under the Bell system the yearly cost per pupil, in a school of five hundred, was only four shillings twopence ($1.00), in 1814. In the United States,

[1] In 1807 Mr. Whitbread, an ardent supporter of schools, said, in an address before the House of Commons: "I cannot help noticing that this is a period particularly favorable for the institution of a national system of education, because within a few years there has been discovered a plan for the instruction of youth which is now brought to a state of great perfection, happily combining rules by which the object of learning must be infallibly attained with expedition and cheapness, and holding out the fairest prospect of utility to mankind."

Lancastrian schools cost from $1.22 per pupil in New York, in 1822, up to $3.00 and $4.00 later on. At first begun as free schools,[1] the expansion of effort was more rapid than the income from contributions, and a small tuition fee was in time charged. Pupils were admitted at about the age of seven, and might remain until thirteen or fourteen, though an attendance of two years was considered "abundantly sufficient for any boy." To prepare skilled masters and mistresses for the schools — girls were provided for in many places — training or model schools were organized by both the national societies, and these represent the beginnings of normal-school training in England.

Infant Schools. Another type of school which became of much importance in England, and spread to other lands, was the Infant School. This owed its origin to Robert Owen, proprietor of the cotton mills at New Lanark, Scotland. Being of a philanthropic turn of mind, and believing that man was entirely the product of circumstance and environment, he held that it was not possible to begin too early in implanting right habits and forming character. Poverty and crime, he believed, were results of errors in the various systems of education and government. So plastic was child nature, that society would be able to mould itself "into the very image of rational wishes and desires." That "the infants of any one class in the world may be readily formed into men of any other class," was a fundamental belief of his.



FIG. 189
ROBERT OWEN
(1771–1858)

When he took charge of the mills at New Lanark (1799) he found the usual wretched social conditions of the time. Children of five, six, and seven years were bound out to the factory as apprentices (R. 242) for a period of nine years. They worked as apprentices and helpers in the factories twelve to thirteen hours a day, and at early manhood were turned free to join the ignorant mass of the population. Owen sought to remedy this condition.

[1] When Lancaster first hired the large hall in Borough Road which later became an important training-college, and opened it as a mutual-instruction school, he announced: "All that will may send their children, and have them educated freely, and those who do not wish to have education for nothing, may pay for it if they *please*."

He accordingly opened schools which children might enter at three years of age, receiving them into the schools almost as soon as they were able to walk, and caring for them while their parents were at work. Children under ten he forbade to work in the mills, and for these he provided schools. The instruction for the children younger than six was to be "whatever might be supposed useful that they could understand," and much was made of singing, dancing, and play. Moral instruction was made a prominent feature. By 1814 his work and his schools had become famous. In 1817 he published a plan for the organization of such industrial communities as he conducted. In 1818 he visited Switzerland, and saw Pestalozzi and Fellenberg.

In 1818 a number of Liberals — Brougham, James Mill, and others — combined to establish an Infant School in London, importing a teacher from New Lanark. The idea took root, was popularized, and the Infant School was soon adopted as an integral part of their schools by both the British and Foreign School Society (Lancastrians) and the National Society (Bell). In 1836 the "Home and Colonial Infant School Society" was formed to train teachers for and to establish Infant Schools. One of the organizers of this society was Charles Mayo who had worked with Pestalozzi at Yverdon (**R. 270**), and through his influence much of the bookishness which had crept in was removed and the better Pestalozzian procedure put in its place.

Unlike the monitorial schools, the Infant Schools were based on the idea of small-group work, and were usually conducted in harmony with the new psychological conceptions of instruction which had been worked out by Pestalozzi, and had by that time begun to be introduced into England. The Infant-School idea came at an opportune time, as the defects of the mechanical Lancastrian instruction were becoming evident and its popularity was waning. It gave a new and a somewhat deeper philosophical interpretation of the educational process, created a stronger demand than had before been known for trained teachers, established a preference for women teachers for primary work, and tended to give a new dignity to teaching and school work by revealing something of a psychological basis for the instruction of little children. It also contributed its share toward awakening a sentiment for national action.

Work of the educational societies. The work of the voluntary and philanthropic educational societies in establishing schools and

providing teachers and instruction before the days of national schools was enormous.[1] Though the State did nothing before 1833, and little before 1870, the work of the educational societies was large and important. What was done by the church societies alone may be seen from the following table:

STATISTICS AS TO 10,595 ELEMENTARY SCHOOLS FOUNDED BY THE RELIGIOUS SOCIETIES (BRITISH CENSUS RETURNS, 1851)

Date	*Total number of schools*	*The National Society, or Church of England, schools*	*British and Foreign Schools Society*	*Independents, or Congregationalists*	*Wesleyan Methodists*	*Roman Catholics*	*Baptists*	*Other religious bodies*
Before 1801	766	709	16	8	7	10		
1801–1811	410	350	28	9	4	10		
1811–1821	879	756	77	12	17	14		
1821–1831	1,021	897	45	21	17	28		
1831–1841	2,417	2,002	191	95	62	69		
1841–1851	4,604	3,448	449	269	239	166		
Not stated	498	409	46	17	17	14	131	331
Totals	10,595	8,571	852	431	363	311	131	331

After about 1820–25 the rising interest in elementary education expressed itself in the formation of a number of additional societies, the more important of which were:

1824. "London Infant School Society" founded by Brougham.
1826. "Society for the Diffusion of Useful Knowledge" founded by Brougham. The *Journal of Education* begun.
1836. "Central Society of Education" founded.
1836. "Home and Colonial Infant Society" founded. Beginning of a Pestalozzian Training College.
1837. "Educational Committee of the Wesleyan Conference established."
1843. "Congregational Board of Education" formed.
1844. "Ragged School Union" founded.
1845. "Catholic Institute."

[1] In 1820, Brougham, in introducing his "Bill for the Better Education of the Poor in England and Wales," gave statistics as to the progress of education at that time in England. His estimate as to the numbers being educated were:
430,000 in endowed and privately managed schools;
220,000 in monitorial schools;
50,000 being educated at home;
100,000 educated only in Sunday Schools;
53,000 being educated in dame schools.
From these figures he argued that one in fifteen of the population of England and one in twenty in Wales were attending some form of school, but with only one in twenty-four in London. The usual period of school attendance for the poorer classes was only one and a half to two years.

1847. The "Catholic Poor-School Committee."
1847. "Lancashire Public School Association" formed.
1850. The "National Public School Association."
1867. "Birmingham Education Aid Society."
1868. The Manchester Conference.
1869. Formation of "The League."

Some of these were formed to found and support schools, and some engaged primarily in the work of propaganda in an effort to secure some national action.

III. THE STRUGGLE FOR NATIONAL EDUCATION

The parliamentary struggle. During the whole of the eighteenth century Parliament had enacted no legislation relating to elementary education, aside from the one Act of 1767 for the education of pauper children in London, and the freeing of elementary schools, Dissenters, and Catholics, from inhibitions as to teaching. In the nineteenth century this attitude was to be changed, though slowly, and after three quarters of a century of struggle the beginnings of national education were finally to be made for England, as they had by then for every other great nation. In 1870 the "no-business-of-the-State" attitude toward the education of the people, which had persisted from the days of the great Elizabeth, was finally and permanently changed. The legislative battle began with the first Factory Act[1] of 1802, Whitbread's Parochial Schools Bill[2] of 1807, and Brougham's first Parliamentary Committee of Inquiry of 1816 (**R. 291**); it finally culminated with the reform of the old endowed Grammar Schools by the Act of 1869, the enactment of the Elementary Education Act of 1870 (**R. 304**), and the Act of 1871 freeing instruction in the universities from religious restrictions (**R. 305**). The first of these enactments declared clearly the right of the State to inquire into, reorganize, and redirect the age-old educational foundations for secondary education; the second made the definite though tardy beginnings of a national system of elementary education for England; and the third opened up a university

[1] Known as the Health and Morals of Apprentices Act. It limited the working hours of apprentices to twelve; forbade night work; required day instruction to be provided in reading, writing, and arithmetic; required church attendance once a month; and provided for the registration and inspection of factories. The Act was very laxly enforced, and its chief value lay in the precedent of state interference which it established.

[2] Whitbread proposed a national system of rate-aided schools to provide all children in England with two years of free schooling, between the ages of seven and fourteen.

career to the whole nation. The agitation and conflict of ideas was long drawn out, and need not be traced in detail. The following tabulated summary will give the main outlines of the struggle, and the selection on "The Educational Traditions of England" (R. 306) gives a good brief history of the long conflict.

THE PARLIAMENTARY STRUGGLE FOR NATIONAL EDUCATION IN ENGLAND

Dates	*Proposals, Reports, etc., and Results*
1802	First Factory Act for regulating employment of children. Adopted.
1807	Whitbread's Parochial Schools' Bill introduced. Rejected by the House of Lords.
1816	Broughman secured a Parliamentary Committee to inquire into the state of education of the lower classes in London, Westminster, and Southwark. Report — 130,000 children without school accommodations [1818]. (R. 291.)
1818	Brougham secured a Committee of Inquiry on Educational Charities. No report until 1837.
1820	Bill introduced proposing a tax for schools and the granting of Government aid in building schoolhouses. Opposed by Dissenters and Catholics. Withdrawn. Brougham's first Educational Bill.
1833	Government aid for building schoolhouses re-proposed. £20,000 a year granted. (R. 299.) Distributed through the two great Educational Societies.
1834	Committee of Inquiry appointed. No result beyond statistics.
1835 1837	Brougham introduced bills to organize a system of elementary education. Bills failed of passage. Educational Inquiry Committee appointed [1837].
1838	Committee report: the deplorable conditions existing. Bill of 1839. Education Department created.
1839	Bill to increase the Government grant to £30,000 and to allow all Societies to share. Inspectors to be appointed. Committee of Privy Council on Education established. Bitter opposition. Carried. Much discussion as to "undenominational education."
1841	Annual grant to establish schools of design in manufacturing districts. Voted.
1843	Sir Jas. Graham's Factory Bill. Opposed by the Dissenters and defeated.
1843	Address to the Crown on condition of the working classes. No parliamentary action.
1846	Yearly grant extended to the maintenance of schools. Gradual increase in the yearly grants.
1846	Minute and Regulations on annual grants and pupil teachers. Foundation of a system laid. Pupil-teacher system definitely established. Certificates to teach. Annual grant extended to maintenance.
1847	Government proposals for nationalizing education. Carried, despite violent religious opposition.
1850	Fox's Bill to make education free and compulsory. Defeated.

THE PARLIAMENTARY STRUGGLE FOR NATIONAL EDUCATION IN ENGLAND (*continued*)

Dates	*Proposals, Reports, etc., and Results*
1853	The Government proposed a small local rate in aid of schools. Bill dropped after the first reading.
1853	Department of Science and Art created, and National Art Training Schools established. Promotion of elementary education in art and science, particularly after 1859.
1855	Three educational Bills introduced. Local rate proposed. Failure to agree. All withdrawn.
1856	Commons asked to declare in favor of rate aid and local Boards. Two Educational Bills introduced. First bill tabled. Second bill withdrawn. Education Department formed.
1858	A Royal Commission to inquire into the state of popular education in England asked for. The Duke of Newcastle's Commission created. Its Report published in 1861. (R. 303.)
1861	No acceptable scheme reported. Code of 1861 proposed. No advance. "Payment by results" begun [1862]. Code adopted.
1864	Schools Inquiry Commission appointed on endowed schools. Report of the Schools Inquiry Commission in 1867.
1866	Report of a Select Committee of the House of Commons on Education.
1867	The Government introduced proposals as to education. Voted down.
1868	Government Bill proposing changes in distribution and larger grants. Parliament adjourned without action.
1869	Endowed Schools' Act passed.
1869	Two Educational Bills introduced. Withdrawn at the request of the Government.
1870	The Elementary Education Act of 1870 introduced. Much amended and passed. (R. 304.) Beginning of a National system of education.
1871	Religious Tests at universities withdrawn (R. 305).

The leaders in the conflict. The main leader in the parliamentary struggle to establish national education, from the death of Whitbread, in 1815, to about 1835, was Henry, afterwards Lord Brougham. He was aided by such men as Blackstone, and Bentham and his followers, and, after about 1837, by such men as Dickens, Carlyle, Macaulay, and John Stuart Mill. Dickens, by his descriptions, helped materially to create a sentiment favorable to education, as a right of the people rather than a charity. He stood strongly for a compulsory and non-sectarian state system of education that would transform the children of his day into generous, self-respecting, and intelligent men and women. Carlyle saw in education a cure for social evils, and held that one

of the first functions of government was to impart the gift of thinking to its future citizens. Writing, in 1840, he said:

> Who would suppose that education were a thing which had to be advocated on the ground of local expediency, or any ground? As if it stood not on the basis of everlasting duty as a prime necessity of man.

Brougham was untiring in his efforts for popular education, and some idea as to the interest he awakened may be inferred from the fact that his *Observations on the Education of the People*, published in 1825, went through twenty editions the first year. He introduced bills, secured committees of inquiry, made addresses,[1] and used his pen in behalf of the education of the people. His belief in the power of education to improve a people was very large. Warning the "Lawgivers of England" to take heed, he once said:



FIG. 190
LORD BROUGHAM
(1778–1868)

> Let the soldier be abroad, if he will; he can do nothing in this age. There is another personage abroad, a person less imposing — in the eye of some insignificant. The Schoolmaster is abroad, and I trust him, armed with his primer, against the soldier in full uniform array.
>
> The conqueror stalks onward with the "pride, pomp, and circumstance of war," banners flying, shouts rending the air, guns thundering, and martial music pealing, to drown the shrieks of the wounded and the lamentations for the slain. Not thus the schoolmaster in his peaceful vocation. He meditates and prepares in secret the plans which are to bless mankind; he slowly gathers around him those who are to further their execution; he quietly, though firmly, advances in his humble path laboring steadily, but calmly, till he has opened to the light all the recesses of ignorance, and torn up by the roots the weeds of vice. His is a progress not to be compared with anything like a march; but it leads to a far more brilliant triumph, and to laurels more imperishable than the destroyer of his species, the scourge of the world, ever won.

Parallel with the agitation for some state action for education was an agitation for social and political reform. The basis for the election of members to the House of Commons was still mediæ-

[1] See J. E. G. de Montmorency's *State Intervention in English Education*, pp. 248–85, for Brougham's address to the Commons in 1820 on "The Education of the Poor"; and pp. 285–324 for his address before the House of Lords in 1835, on "The Education of the People." Both addresses contain an abundance of data as to existing conditions and needs.



FIG. 191. AN ENGLISH VILLAGE SCHOOL IN 1840
(After a drawing by Hablôt K. Browne, and printed in Charles Dickens's "Master Humphrey's Clock")

val. Boroughs no longer inhabited still returned members, and sparsely settled regions returned members out of all proportion to the newly created city populations. Few, too, could vote. Only about 160,000 persons in a population of 10,000,000 had, early in the century, the right of the franchise. The city populations were practically disfranchised in favor of rural landlords, the nobility, and the clergy. In 1828 Protestant Non-Conformists were relieved of their political disability, and in 1829 a similar enfranchisement was extended to Catholics. In 1832 came the first real voting reform in the passage of the so-called *Third Reform Bill*,[1] after a most bitter parliamentary struggle. This reapportioned the membership of the House on a more equitable basis, and enfranchised those who owned or leased lands or buildings of a value of £10 a year. The result of this was to enfranchise the middle class of the population; increase the number of voters (1836) from about 175,000 to about 839,500 out of 6,023,000 adult males; and effectively break the power of the House of Lords to elect the House of Commons. Progressive

[1] So called because the House of Lords rejected the first two passed by the Commons, and finally accepted the third only because the King had agreed to create enough new Lords to pass the bill unless it were enacted by the upper House.

legislation now became much easier to secure, and in 1833 a Bill making a grant of £20,000 a year to aid in building schoolhouses for elementary schools — the first government aid for elementary education ever voted in England — became a law (R. 299). During the few years following the passage of the Reform Bill many progressive measures were enacted, among which should be mentioned the abolition of slavery in the colonies; the beginnings of legislation looking to a scientific treatment of poverty and non-employment; the Municipal Reform Act (1835); the institution of the penny post (1839); and the abolition of the Corn Laws (1846); while after 1837 education began to take a prominent place in the programs of the new working-class movement.

Progress after 1833. The Law of 1833, though, made but the merest beginnings, and up to 1840 the money granted was given to the two great national school societies, and without regulation. Beginning in 1840, and continuing up to the beginnings of national education, in 1870, the grants were state-controlled and distributed through the different educational societies. The total of these grants, by years, and the proportional share of the different educational societies are well shown in the chart (Fig. 192.) In 1846 the grants were extended to maintenance as well, and in 1847 Catholic and Wesleyan societies were admitted to share in the grants. Soon thereafter we note a sharp upward turn of the curve, though the Church-of-England schools obtained the greater proportion of the increased funds. Proposals to add local taxation, in 1853 and 1856, were dropped almost as soon as made. The commercial and manufacturing interests, though, secured separate aid for art and science instruction (1841, 1853), and the creation of national art training-schools (1853). Training-schools for teachers also were begun, and aided by grants. In 1845 the English "pupil-teacher" system[1] also was begun in an effort to supply teachers of some little training. A State Department of Education was created, in 1856, though without much power, and the various "Minutes" which were now adopted were organized into a system and presented to Parliament as a *School Code*, in 1861, and finally approved.

New Educational Commissions were created to inquire into educational conditions and needs in 1858 and 1864, and these reported in 1861 and 1867, but without important results. The

[1] This was a development of the monitorial system of training, and was virtually an apprenticeship form of teacher-training.

most notable of these was the Duke of Newcastle's Commission, appointed in 1858 to review conditions, progress, and needs, and to make recommendations for the future. This Commission reported in 1861. It stated that one in every eight of the population was then in some kind of school; gave statistics as to condi-

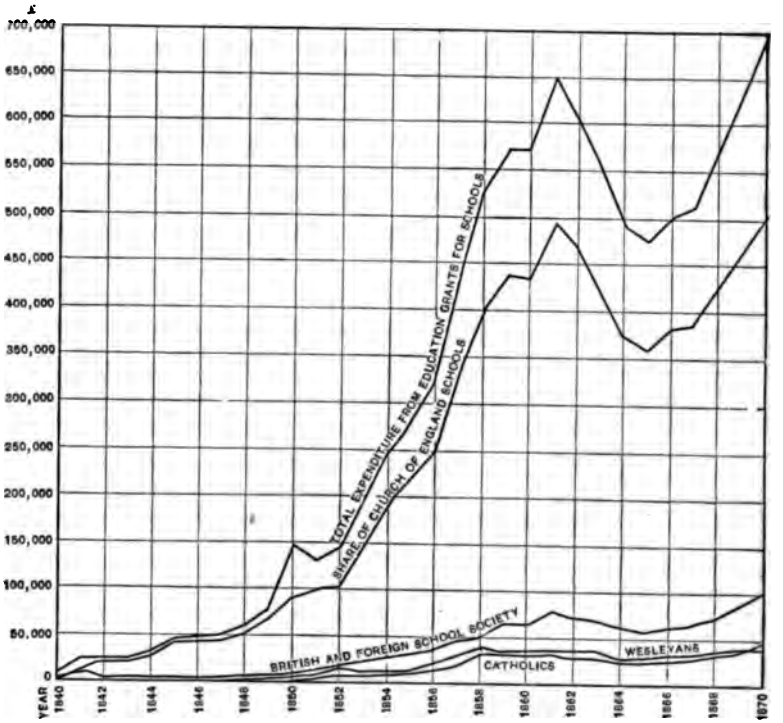


FIG. 192. EXPENDITURE FROM THE EDUCATION GRANTS, 1839–70

Between 1833 and 1839 no Government regulation of grants. The above figures do not include administration expenses, or grants made to Scotland (about the same in amount as the Br. & F. S. Soc.) or to the Parochial Schools Union (very small). The drop in the curve between 1862 and 1867 was due to the introduction of the "payment by results" plan.

tions (**R. 303 a**); and held that the plan of leaving popular education to the voluntary initiative of communities had been justified by the results. The report presented no plan for national organization, but recommended a number of minor changes in conditions. In particular it recommended the introduction of the system of "payment by results" — that is, of making money grants to schools on the basis of the number of pupils passing set examinations in reading, writing, and arithmetic (**R. 303 b**). This

plan was begun in 1862, and the consequent drop in money grants for a few years thereafter is shown in the curves of the chart. The other Commission, appointed, known as the Taunton Schools Inquiry Commission (1864–67), dealt with the old endowed schools, and in particular called attention to the lack of secondary-school facilities, especially in the cities, and recommended an extension of secondary-school facilities and a democratization of the whole system of secondary education. The important legislation of this period was the freeing of the old universities from Church-of-England control (**R. 305**) and making them national in spirit.

Difficulties encountered. In the meantime liberal leaders, Schools Inquiry Commissions, official reports, and educational propagandists continued to pile up evidence as to the inadequacy of the old voluntary system. A few examples, out of hundreds that might be cited, will be mentioned here. Lord Macaulay, in an address made in Parliament, in 1847 (**R. 300**), defending a "Minute" of the "Committee of Privy Council on Education" (created in 1839) proposing the nationalization of education, held it to be "the right and duty of the State to provide for the education of the common people," as an exercise of self-protection, and warned the Commons of dangers to come if the progressive tendencies of the time were not listened to. The Census Returns of 1851, as well as the abundance of data published by the Schools Inquiry Commissions, were effectively used to reveal the inadequate provisions for the education of the masses. The Reports of the school inspectors, too, revealed conditions in need of being remedied in all phases of educational effort. The Report on the Apprenticing of Pauper Children (**R. 301**) is selected as typical of many similar reports.



FIG. 193
LORD MACAULAY
(1800–59)

So deeply ingrained, though, was the English conception of education as a private and voluntary and religious affair and no business of the State; so self-contained were the English as a people; and so little did they know or heed the progress made in other lands, that the arguments for national action encountered tremendous opposition from the Conservative elements, and often

FACTS REVEALED BY THE CENSUS OF 1851

Items	1833	1851
(1) Population of England and Wales	14,400,000	17,927,609
(2) Middle and upper classes population	2,000,000	2,489,945
(3) Laboring class population	12,400,000	15,437,664
(4) Population 3–12 years of age of (2)	420,000	522,888
(5) Population 3–12 years of age of (3)	2,604,000	3,241,919
(6) Number of schools for children of (2)	14,897	16,324
(7) Number of schools for children of (3)	24,074	29,718
(8) Pupils of class (2) in schools	481,728	546,396
(9) Pupils of class (3) in schools	795,219	1,597,982
(10) Percentage of children of class (2) at school	114.6	104.4
(11) Percentage of children of class (3) at school	30.5	49.2

were opposed even by Liberals. The reasoning of Sir James Kay-Shuttleworth (**R. 302**), Secretary of the Committee of Council on Education and one of the clearest heads in England in his day, who held that a fee for instruction had a moral value and vindicated personal freedom, and who resented the interference of the State in the matter of a parent's relation to his child, was typical of thousands of others. Edward Baines (1774–1848), proprietor of the *Leeds Mercury*, the chief Liberal organ in northern England, bitterly opposed any action looking toward nationalizing education. He expressed the feeling of many when he wrote:

> Civil government is no fit agency for the training of families or of souls. . . . Throw the people on their own resources in education, as you did in industry; and be assured, that, in a nation so full of intelligence and spirit, Freedom and Competition will give the same stimulus to improvement in our schools, as they have done in our manufactures, our husbandry, our shipping, and our commerce.

The beginnings of national organization. By 1865 it had become evident to a majority that the voluntary system, whatever its merits, would never succeed in educating the nation, and from this time forth the demand for some acceptable scheme for the organization of national education became a part of a still more general movement for political and social reform. Once more, as in 1832–33, an education law was enacted following the passage of a bill for electoral reform and the extension of the suffrage.

Though the Liberal Party was in power, it was well satisfied with the Reform Act of 1832 because through it the middle classes of the population, which the Liberal Party represented, had gained control of the government. The country, though, was not — the

working-classes in particular demanding a share in the government. Finally the demand became too strong to be resisted, and the Second Reform Act, of 1867, became a law. This abolished a number of the remaining smaller boroughs, and greatly extended the right to vote. In the country the amount of property to be owned to vote was reduced from £10 to £5, and the leasehold value from £50 to £12. In the cities and towns the vote was now given to all householders, and to all lodgers who paid a yearly rental of £10. This legislation gave the vote to a vastly increased number of people, particularly city workers,[1] and was a political revolution for England of great magnitude.

From the passage of this new Reform Act to 1870, the organization of national education only awaited the formulation of some acceptable scheme. "We must educate our new masters," now became a common expression. The main question was how to create schools to do what the voluntary schools had shown themselves able to do for a part, but were unable to do for all, without at the same time destroying the vast denominational system[2] that, in spite of its defects, had "done the great service of rearing a race of teachers, spreading schools, setting up a standard of education, and generally making the introduction of a national system possible." The way in which these "vested interests" were cared for was typically English, and characteristic of the strong sense of obligation of the English people. In 1870 a compromise law was proposed and carried. Mr. Gladstone, then Prime Minister, stated the attitude of the Government in framing the new law, when he said:[3]

It was with us an absolute necessity — a necessity of honour and a necessity of policy — to respect and to favour the educational establishments and machinery we found existing in the country. It was impossible for us to join in the language or to adopt the tone which was conscientiously and consistently taken up by some members of the House, who look upon these voluntary schools, having generally a denominational character, as admirable passing expedients, fit, in-

[1] In 1885 the same liberty was extended to rural laborers. This added two million more voters, and gave England almost full manhood suffrage. Finally, in 1918, some five million women were added to the voting classes.

[2] Nearly two million children had been provided with school accommodations, three fourths of which had been done by those associated with the Church of England. In doing this the Church had spent some £6,270,000 on school buildings, and had raised some £8,500,000 in voluntary subscriptions for maintenance. The Government had also paid out some £6,500,000 in grants, since 1833. In 1870 it was estimated that 1,450,000 children were on the registers of the state-aided schools, while 1,500,000 children, between the ages of six and twelve, were unprovided for.

[3] Speech before the House of Commons, July 22, 1870.

deed, to be tolerated for a time, deserving all credit on account of the motives which led to their foundation, but wholly unsatisfactory as to their main purpose, and therefore to be supplanted by something they think better.... That has never been the theory of the Government. . . . When we are approaching this great work, which we desire to make complete, we ought to have a sentiment of thankfulness that so much has been done for us.

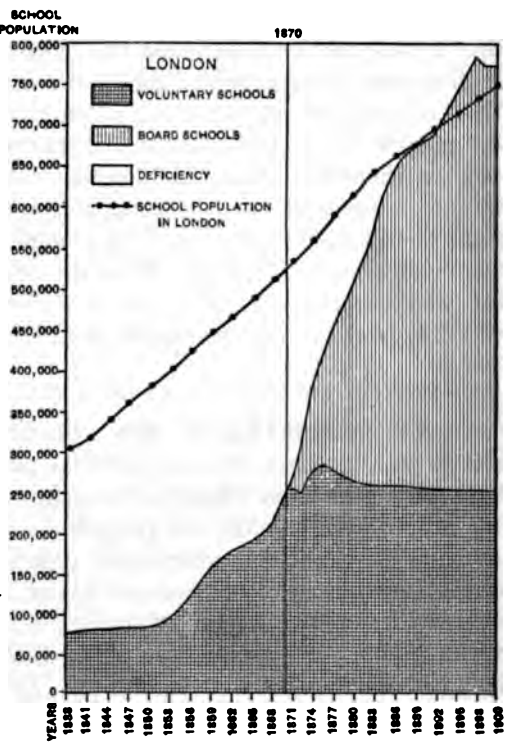


FIG. 194. WORK OF THE SCHOOL BOARDS IN PROVIDING SCHOOL ACCOMMODATIONS

London taken as a type. Note the deficiency in school accommodation in 1838, that the voluntary schools made no appreciable gain on this deficiency up to 1870, the attempt to cope with the situation between 1871 and 1874, and the long pull of the new Board schools necessary to provide sufficient schools and seats.

Accordingly the Elementary Education Bill of 1870 (R. 304) preserved the existing Voluntary Schools; divided the country up into school districts; gave the denominations a short period in which to provide schools, with aid for buildings; [1] and thereafter, in any place where a deficiency in school accommodations could be shown to exist, School Boards were to be elected, and they should

[1] "The clergy of the National Society exhibited amazing energy and succeeded, according to their own account, in doing in twelve months what in the normal course of events would have taken twenty years. By the end of the year they had lodged claims for 2885 building grants, out of a total of 3342. They also set to work, without any governmental assistance, to enlarge their schools and so increased denominational accommodation enormously. The voluntary contributions in aid of this work have been estimated at over £3,000,000. At the same time the annual subscriptions doubled. . . . By 1886, over 3,000,000 places had been added, one-half of which were due to voluntary agencies, and Voluntary Schools were providing rather more than two-thirds of the school places in the country. In 1897 the proportion had fallen to three-fifths." (Birchenough, C., *History of Elementary Education*, pp. 138, 140.)

have power to levy taxes and maintain elementary schools. Existing Voluntary Schools might be transferred to the School Boards, whose schools were to be known as Board Schools. The schools were not ordered made free, but the fees of necessitous children were to be provided for by the School Boards, and they might compel the attendance of all children between the ages of five and twelve. Inspection and grants were limited to secular subjects, though religious teaching was not forbidden. The central government was to be secular and neutral; the local boards might decide as they saw fit. Such were the beginnings of national education in England. That the new Board Schools met a real need, especially in the cities, is shown by the chart on the preceding page, giving the results in London.

IV. THE DEVELOPMENT OF A NATIONAL SYSTEM

Progress under the Law of 1870. Beginning in 1871 the Board Schools had, by 1893, come to enroll 41 per cent of the pupils in elementary schools in England, as against 44 per cent in Voluntary Schools, and by 1903 the proportions were 49 per cent to 39 per cent. By 1902 the government grants for maintenance had reached, for all schools, £8,000,000 a year, and the Board Schools were rapidly outrunning the Voluntary Schools both in numbers and in per-capita expenditures. The Board Schools had made their greatest headway in the cities. In 1895 there were still some 11,000 small parishes which had no Board Schools, and in consequence paid no direct taxes for schools. Of these, 8000 had only Church-of-England Voluntary Schools.

In 1880 elementary education had been made fully compulsory, and in 1891 largely free. In 1893 the age for exemption from attendance was fixed at eleven, and in 1899 this was raised to twelve. In 1888 county and borough councils had been created, better to enforce the Act and to extend supervision. The *Annual Codes*, from 1870 to 1902, gradually extended governmental control through more and more detailed instructions as to inspection, the addition of new subjects, and better compulsion to attend. In 1899 a Central Board of Education, under a President and a Parliamentary Secretary, was created, to consolidate in one body the work formerly done by:

a. The Committee of Council on Education (established 1839), which administered the grants for elementary education.

b. The Department of Science and Art (established 1853), which

administered the grants for special and evening instruction in science and art.

c. The Charity Commissioners, to which had been given (1874) supervision of the old educational trusts and endowments for education.

d. The educational functions of the Board of Agriculture.

This new Board unified the administration of elementary and secondary education for the first time in English history.

By about 1895 the strain on the Voluntary Schools had become hard to bear. The Church resented the encroachments of the State on its ancient privilege of training the young, and the larger resources which the Board Schools could command. In 1895 the Conservative party won the parliamentary elections, and remained in power for some years. This was the opportunity of the Voluntary Schools, and in 1897 a special national-aid grant of five shillings per pupil in average daily attendance was made to the Voluntary Schools. This simply increased the general dissatisfaction, and there was soon a general demand for new legislation that would reconcile the whole question of national education. The Law of 1902 was the ultimate result.

The Annexation Law of 1902. The Balfour Education Act of 1902 marks the beginning of a new period in English education. For the first time in English history education of all grades — elementary, secondary, and higher; voluntary and state — was brought under the control of one single local authority, and Voluntary Schools were taken over and made a charge on the "rates" equally with the Board Schools. New local Educational Committees and Councils replaced the old School Boards, and all secular instruction in state-aided schools of all types was now placed under their control. Religious instruction could continue where desired. In addition, one third of the property of England, which had heretofore escaped all direct taxation for education, was now compelled to pay its proper share. The foundation principle that "the wealth of the State must educate the children of the State" was now applied, for the first time.

The State now abandoned the old policy of merely supervising and assisting voluntary associations to maintain schools, in competition with state-provided schools, and assumed the whole responsibility for the secular instruction of the people. Though the law awakened intense opposition from those who felt that it "riveted the hand of the cleric on the schools of the land," it

nevertheless equalized and unified educational provisions; paved the way for much future progress; made the general provision of secondary education possible; and represented an important new step in the process of creating a national system of education for the people. Under this Law much has been done by the new Central Board of Education, and subsequent supplementary legislation, to increase materially the efficiency of the education provided.

Since 1902 the cost for education per pupil has been increased more than one half. The local authorities, to whom were given large powers of control, have levied taxes liberally, and the State has also increased its grants. Since 1902 also there has been a continual agitation for a resettlement of the educational question along broad national lines. Bills have been introduced, and important committees have considered the matter, but no affirmative action was taken. By the time of the opening of the World War it may be said that English opinion had about agreed upon the principle of public control of all schools, absolute religious freedom for teachers, local option as to religious instruction, large local liberty in management and control, well-trained and well-paid teachers, and the fusing of all types of schools into a democratic and truly national school system, strong in its unity and national elements, but free from centralized bureaucratic control. It was left for the World War to give emphasis to this national need and to permit the final creation of such an educational organization.

The incorporation of secondary education into the national system. For centuries the education of the small ruling class had been conducted by the private tutor and the endowed secondary school, and had been completed by a few years at Oxford or Cambridge. The Reform Bill of 1832 had raised the middle commercial and industrial classes to power, and had created new demands for secondary and higher education for the sons of this class. The old endowed schools were now no longer sufficient in numbers, and the result was the founding of many private and joint-stock-company secondary schools to minister to the new educational needs. The Second Reform Bill of 1867 enfranchised a very much greater number of citizens, and the increasing wealth and the increasing demands for educational advantages led to an insistence for a further extension along secondary and higher lines. The result was seen in the investigation of the nine "Great

Public Schools" of England,[1] by the Lord Clarendon Commission (1861–64); and the appointment of the British Schools Inquiry Commission of 1864–67, to inquire into the 820 other endowed schools and the 122 proprietary or joint-stock-company schools of the land. The Report of the first led to the Public Schools Act of 1868, reforming abuses and regulating the use of their old endowments. The second pointed out the great deficiency then existing in secondary education,[2] and led to the enactment of the Endowed Schools Act of 1869, placing all endowed schools under centralized supervision. We see here the beginnings of state supervision and control of the age-old endowments for Latin grammar schools and other types of schools for secondary training. The repeal of the old Religious-Tests-for-Degrees legislation, at the old universities (**R.** 305), in 1871, transformed these from Church-of-England into national institutions, and opened up the whole range of education to all who could meet the standards and pay the fees.

Under the Act of 1870 many local school boards, especially in the manufacturing cities, began to satisfy the new needs by the organization of Higher Grade Schools, or High Schools, to supplement the work of the elementary schools and to extend upward, in a truly democratic fashion, the educational ladder. In this movement the manufacturing cities of Sheffield, Birmingham, and Manchester were the leaders. In these three cities also, as well as in four others (Bristol, Leeds, Liverpool, and London)[3] new modern-type universities were created. The Department of Science and Art (created in 1853) also began, in 1872, to give large grants to the cities for the establishment of a three-years' course in science, for the encouragement of scientific training. These new secondary-type schools, providing for the direct passage of children from the elementary to the secondary schools, with many free places for capable students, served to increase the friction between rate-aided schools on the one hand, and voluntary and endowed and proprietary schools on the other. Carry-

[1] These were the seven endowed secondary boarding schools — Winchester (1382), Eton (1440), Shrewsbury (1552), Westminster (1560), Rugby (1567), Harrow (1571), and Charterhouse (1611) — and the two endowed day schools, — Saint Paul's (1510) and Merchant Taylors' (1561).

[2] At least one hundred towns, the Report showed, with a population of five thousand or over had no endowed secondary school, and London, with a population then (1867) of over three million, had but twenty-six schools and less than three thousand pupils enrolled. All the new manufacturing cities were in even worse condition than London.

[3] The University of London was originally founded in 1836, and reorganized in 1900.

ing out, as they did, Huxley's idea of a broad educational ladder,[1] they also represented a very democratic innovation in English educational procedure.

In 1894 a Commission — a favorite English method for considering vexatious questions — was appointed, under the chairmanship of Mr. James (afterwards Lord) Bryce, "to consider the best methods of establishing a well-organized system of secondary education in England." The Report was important and influential. It recommended the creation of a general Board of Education under a responsible government Minister, with a permanent Secretary and a Consultative Educational Council (as was done in 1899); the establishment of local county and borough boards to provide adequate secondary-school accommodations, with aid from the "rates"; the inspection of secondary schools by the Central Board of Education; the professional training of secondary-school teachers; and a great extension of the free-scholarship plan to children from the elementary schools. On this last point the Report said: [2]

> We have to consider the means whereby the children of the less well-to-do classes of our population may be enabled to obtain such secondary education as may be suitable and needful for them. As we have not recommended that secondary education shall be provided free of cost to the whole community, we deem it all the more needful that ample provision be made by every local authority for enabling selected children of poorer parents to climb the educational ladder. . . . The assistance we have contemplated should be given by means of a carefully graduated system of scholarships, varying in value in the age at which they are awarded and the class of school or institution at which they are tenable.

The Act of 1902 unified control of both elementary and secondary education. Any private or endowed secondary school was left free to accept or reject government aid and inspection, but, if the aid were accepted, inspection and the following of government plans were required. Secondary education must provide for scholars up to or beyond the age of sixteen. No attempt was made to unify the work and character of the secondary schools, it being clearly recognized that, in England at least, these must be suited to the different requirements of the scholars, the means

[1] The scientist Thomas Huxley was a London School Board member, and, speaking as such, he expressed the views of many when he said: "I conceive it to be our duty to make a ladder from the gutter to the university along which any child may climb."

[2] *Royal (Bryce) Commission on Secondary Education*, vol. I, p. 299. London, 1895.

of the parents, the age at which schooling will stop, and the probable place in the social organism of England which the pupils will occupy. By 1910, out of 841 secondary schools in England receiving grants of state aid, 325 were supported by local authorities and were the creations of the preceding four decades. Most of the others represented old Latin grammar-school foundations, thus incorporated into the national system, and without that violence and destruction of endowments which characterized the transformations in France and Italy.

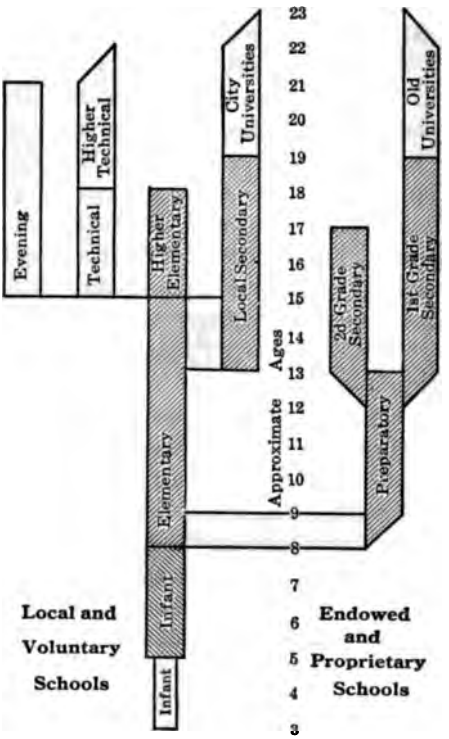


FIG. 195. THE ENGLISH EDUCATIONAL SYSTEM AS FINALLY EVOLVED

The years, for the divisions of English education, are only approximate, as English education is more flexible than that found in most other lands.

A national system at last evolved. It is a little more than two centuries from the founding of the Society for the Promotion of Christian Knowledge (1699) to the very important Fisher Education Act[1] of August, 1918. The first marked the beginnings of the voluntary system; the second "the first real attempt in England to lay broad and deep the foundations of a scheme of education which would be truly national." This Act, passed by Parliament in the midst of a war which called upon the English people for heavy sacrifices, completed the evolution of two centuries and organized the educational resources—elementary, secondary, evening, adult, technical, and higher—into one

[1] Known as the "Education Act, 1918" (8 and 9 Geo. V, ch. 39). The Act has been reprinted in full in the *Biennial Survey of Education, 1916–18*, of the United States Commissioner of Education, in the chapter on Education in Great Britain. It also has been reprinted as an appendix to Moore, E. C., *What the War teaches about Education*, New York, 1919.

national system, animated by a national purpose, and aimed at the accomplishment for the nation of twentieth-century ends on the most democratic basis of any school system in Europe. In so doing Huxley's educational ladder has not only been changed into a broad highway, but the educational traditions of England (R. 306) have been preserved and moulded anew.

The central national supervisory authority has been still further strengthened; the compulsion to attend greatly extended; and the voice of the State has been uttered in a firmer tone than ever before in English educational history. Taxes have been increased; the scope of the school system extended; all elements of the system better integrated; laggard local educational authorities subjected to firmer control; the training of teachers looked after more carefully than ever before; and the foundations for unlimited improvement and progress in education laid down. Still, in doing all this, the deep English devotion to local liberties has been clearly revealed. The dangers of a centralized French-type educational bureaucracy have been avoided; necessary, and relatively high, minimum standards have been set up, but without sacrificing that variety which has always been one of the strong points of English educational effort; and the legitimate claims of the State have been satisfied without destroying local initiative and independence. In this story of two centuries and more of struggle to create a really national system of education for the people we see strongly revealed those prominent characteristics of English national progress — careful consideration of new ideas, keen sensitiveness to vested rights, strong sense of local liberties and responsibilities, large dependence on local effort and good sense, progress by compromise, and a slow grafting-on of the best elements of what is new without sacrificing the best elements of what is old.

QUESTIONS FOR DISCUSSION

1. Show that the English method of slow progress and after long discussion would naturally result in a plan bearing evidence of many compromises.
2. What does the extensive Charity-School movement in eighteenth-century England indicate as to the comparative general interest in learning in England and the other lands we have previously studied?
3. Show how the Sunday-School instruction, meager as it was, was very important in England in paving the way for further educational progress.
4. What do all the different late eighteenth-century voluntary educational movements indicate as to comparative popular interest in education in England and Prussia? England and France?

5. Can you explain the much greater percentage of city poor in England in the late eighteenth and early nineteenth centuries than in French or German lands?
6. Can you explain why periods of prolonged warfare are usually followed by periods of social and political unrest?
7. Can you explain why Pestalozzian ideas found such slow acceptance in England?
8. Explain, on the basis of the English adult manufacturing conception of education, why monitorial instruction was hailed as "a new expedient, parallel and rival to the modern inventions in the mechanical departments."
9. To what extent do we now accept Robert Owen's conception of the influence of education on children?
10. Show how the many philanthropic societies for the education of the children of the poor came in as a natural transition from church to state education.
11. Show the importance of the School Societies in accustoming people to the idea of free and general education.
12. Show how the Lancastrian system formed a natural bridge between private philanthropy in education and tax-supported state schools.
13. Why were the highly mechanical features of the Lancastrian organization so advantageous in its day, whereas we of to-day would regard them as such a disadvantage?
14. Explain how the Lancastrian schools dignified the work of the teacher by revealing the need for teacher-training.
15. Assuming that there may be some validity to the arguments of Kay-Shuttleworth, what are the limitations to such reasoning?
16 What theory as to education would naturally lie behind a "payment-by-results" plan of distributing state aid?
17. Show how English educational development during the nineteenth century has been deeply modified by the progress of democracy.
18. Show how the English have attained to minimum standards without imposing uniform requirements that destroy individuality and initiative.

SELECTED READINGS

In the accompanying *Book of Readings* the following illustrative selections are reproduced:

291. Parliamentary Report: Charity-School Education described.
292. S.P.C.K.: Cost and Support of Charity-Schools.
293. Raikes: Description of the Gloucester Sunday Schools.
294. Guthrie: Organization, Support, and Work of a Ragged School.
295. Smith, A.: On the Education of the Common People.
296. Malthus: On National Education.
297. Smith, S.: The School of Lancaster described.
298. Philanthropist: Automatic Character of the Monitorial Schools.
299. Montmorency, de: The First Parliamentary Grant for Education.
300. Macaulay: On the Duty of the State to Provide Education.
301. Mosely: Evils of Apprenticing the Children of Paupers.
302. Kay-Shuttleworth: Typical Reasoning in Opposition to Free Schools.
303. Macnamera: The Duke of Newcastle Commission Report.
304. Statute: Elementary Education Act of 1870.
305. Statute: Abolition of Religious Tests at the Universities.
306. Times: The Educational Traditions of England.

QUESTIONS ON THE READINGS

1. Characterize the type of education described by the witness (291).
2. Considering equipment provided and comparative money values, then and now, about how much of an effort did support (292) involve?
3. What class of children did Raikes (293) make provision for?
4. Characterize the type of education provided (294) in the Ragged Schools.
5. Would Adam Smith's reasoning (295) still hold true?
6. Would that of Malthus (296)?
7. Indicate the improvements Lancaster had made (297, 298) in organization and teaching efficiency.
8. Was the first English parliamentary grant (299) expressive of deep national interest?
9. Would Macaulay's reasoning (300) still be true?
10. Is it probable that the apprenticing of paupers had always given such (301) results?
11. How sound was Kay-Shuttleworth's reasoning (302)?
12. What merit was there to the "payment-by-results" recommendation of the Duke of Newcastle Commission (303)?
13. Just what kind of schools did the Act of 1870 (304) make provision for?
14. Have we ever had such religious requirements as those so long maintained (305) at the English universities?

SUPPLEMENTARY REFERENCES

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Adams, Francis. *History of the Elementary School Contest in England.*

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*Birchenough, C. *History of Elementary Education in England and Wales since 1800.*

Escott, T. H. S. *Social Transformations of the Victorian Era.*

Harris, J. H. *Robert Raikes; the Man and his Work.*

*Holman, H. *English National Education.*

*Montmorency, J. E. G. de. *The Progress of Education in England.*

*Montmorency, J. E. G. de. *State Intervention in English Education to 1833.*

*Salmon, David. *Joseph Lancaster.*

CHAPTER XXV

AWAKENING AN EDUCATIONAL CONSCIOUSNESS IN THE UNITED STATES

I. EARLY NATIONAL ATTITUDES AND INTERESTS

The American problem. The beginnings of state educational organization in the United States present quite a different history from that traced for Prussia, France, Italy, or England. While the parochial school existed in the Central Colonies, and in time had to be subordinated to state ends; and while the idea of education as a charity had been introduced into all the Anglican Colonies, and later had to be stamped out; the problem of educational organization in America was not, as in Europe, one of bringing church schools and old educational foundations into harmonious working relations with the new state school systems set up. Instead the old educational foundations were easily transformed to adapt them to the new conditions, while only in the Central Colonies did the religious-charity conception of education give any particular trouble. The American educational problem was essentially that of first awakening, in a new land, a consciousness of need for general education; and second, that of developing a willingness to pay for what it finally came to be deemed desirable to provide.

By the middle of the eighteenth century, as we have pointed out (p. 438), the earlier religious interests in America had clearly begun to wane. In the New England Colonies the school of the civil town had largely replaced the earlier religious school. In the Middle Colonies many of the parochial schools had died out. In the Southern Colonies, where the classes in society and negro slavery made common schools impossible, and the lack of city life and manufacturing made them seem largely unnecessary, the common school had tended to disappear. Even in New England, where the Calvinistic conception of the importance of education had most firmly established the idea of school support, the eighteenth century witnessed a constant struggle to prevent the dying-out of that which an earlier generation had deemed it important to create.

Effect of the war on education. The effect of the American War for Independence, on all types of schools, was disastrous.

The growing troubles with the mother country had, for more than a decade previous to the opening of hostilities, tended to concentrate attention on other matters than schooling. Political discussion and agitation had largely monopolized the thinking of the time.

With the outbreak of the war education everywhere suffered seriously. Most of the rural and parochial schools closed, or continued a more or less intermittent existence. In New York City, then the second largest city in the country, practically all schools closed with British occupancy and remained closed until after the end of the war. The Latin grammar schools and academies often closed from lack of pupils, while the colleges were almost deserted. Harvard and Kings, in particular, suffered grievously, and sacrificed much for the cause of liberty. The war engrossed the energies and the resources of the peoples of the different Colonies, and schools, never very securely placed in the affections of the people, outside of New England, were allowed to fall into decay or entirely disappear. The period of the Revolution and the period of reorganization which followed, up to the beginning of the national government (1775–89), were together a time of rapid decline in educational advantages and increasing illiteracy among the people. Meager as had been the opportunities for schooling before 1775, the opportunities by 1790, except in a few cities and in the New England districts, had shrunk almost to the vanishing point. For Boston (**R.** 307), Providence (**Rs.** 309, 310), and a number of other places we have good pictures preserved of the schools which actually did exist.

The close of the war found the country both impoverished and exhausted. All the Colonies had made heavy sacrifices, many had been overrun by hostile armies, and the debt of the Union and of the States was so great that many thought it could never be paid. The thirteen States, individually and collectively, with only 3,380,000 people, had incurred an indebtedness of $75,000,000 for the prosecution of the conflict. Commerce was dead, the Government of the Confederation was impotent, petty insurrections were common, the States were quarreling continually with one another over all kinds of trivial matters, England still remained more or less hostile, and foreign complications began to appear. That during such a crucial period, and for some years following, but little or no attention was anywhere given to the question of education was only natural.

No real educational consciousness before about 1820. Regardless of the national land grants for education made to the new States (p. 523), the provisions of the different state constitutions (**R. 259**), the beginnings made here and there in the few cities of the time, and the early state laws (**R. 262**), it can hardly be said that the American people had developed an educational consciousness, outside of New England and New York, before about 1820, and in some of the States, especially in the South, a state educational consciousness was not awakened until very much later. Even in New England there was a steady decline in education during the first fifty years of the national history.

There were many reasons in the national life for this lack of interest in education among the masses of the people. The simple agricultural life of the time, the homogeneity of the people, the absence of cities, the isolation and independence of the villages, the lack of full manhood suffrage in a number of the States, the want of any economic demand for education, and the fact that no important political question calling for settlement at the polls had as yet arisen, made the need for schools and learning seem a relatively minor one. The country, too, was still very poor. The Revolutionary War debt still hung in part over the Nation, and the demand for money and labor for all kinds of internal improvements was very large. The country had few industries, and its foreign trade was badly hampered by European nations. Ways and means of strengthening the existing Government and holding the Union together,[1] rather than plans which could bear fruit only in the future, occupied the attention of the leaders of the time.

When the people had finally settled their political and commercial future by the War of 1812–14, and had built up a national consciousness on a democratic basis in the years immediately following, and the Nation at last possessed the energy, the money, and the interest for doing so, they finally turned their energies toward the creation of a democratic system of public schools. In the meantime, education, outside of New England, and in part even there, was left largely to private individuals, churches, incorporated school societies, and such state schools for the children

[1] "The Constitution," as John Quincy Adams expressed it, "was extorted from the grinding necessities of a reluctant people" to escape anarchy and the ultimate entire loss of independence, and many had grave doubts as to the permanence of the Union. It was not until after the close of the War of 1812 that belief in the stability of the Union and in the capacity of the people to govern themselves became the belief of the many rather than the very few, and plans for education and national development began to obtain a serious hearing.

of the poor as might have been provided by private or state funds, or the two combined.

The real interest in advanced education. In so far as the American people may be said to have possessed a real interest in education during the first half-century of the national existence, it was manifested in the establishment and endowment of academies and colleges rather than in the creation of schools for the people. The colonial Latin grammar school had been almost entirely an English institution, and never well suited to American needs. As democratic consciousness began to arise, the demand came for a more practical institution, less exclusive and less aristocratic in character, and better adapted in its instruction to the needs of a frontier society. Arising about the middle of the eighteenth century, a number of so-called Academies had been founded before the new National Government took shape. While essentially private institutions, arising from a church foundation, or more commonly a local subscription or endowment, it became customary for towns, counties, and States to assist in their maintenance, thus making them semi-public institutions. Their management, though, usually remained in private hands, or under boards or associations.[1]

Beside offering a fair type of higher training[2] before the days of high schools, the academies also became training-schools for teachers, and before the rise of the normal schools were the chief source of supply for the better grade of elementary teachers.

[1] After the beginning of the national life a number of States founded and endowed a state system of academies. Massachusetts, in 1797, granted land endowments to approved academies. Georgia, in 1783, created a system of county academies for the State. New York extended state aid to its academies, in 1813, having put them under state inspection as early as 1787. Maryland chartered many academies between 1801 and 1817, and authorized many lotteries to provide them with funds, as did also North Carolina. The Rhode Island General Assembly chartered many academies, and aided them by lotteries. Ohio, Kentucky, and Indiana, among western States, also provided for county systems of academies.

[2] The study of Latin and a little Greek had constituted the curriculum of the old Latin grammar school, and its purpose had been almost exclusively to prepare boys for admission to the colony colleges. In true English style, Latin was made the language of the classroom, and even attempted for the playground as well. As a concession, reading, writing, and arithmetic were sometimes taught. The new caademies, while retaining the study of Latin, and usually Greek, though now taught through the medium of the English, added a number of new studies adapted to the needs of a new society. English grammar was introduced and soon rose to a place of great importance, as did also oratory and declamation. Arithmetic, algebra, geometry, geography, and astronomy were in time added, and surveying, rhetoric (including some literature), natural and moral philosophy, and Roman antiquities were frequently taught. Girls were admitted rather freely to the new academies, whereas the grammar schools had been exclusively for boys. For better instruction a "female department" was frequently organized.

These institutions rendered an important service during the first half of the nineteenth century, but were in time displaced by the publicly supported and publicly controlled American high school, the first of which dates from 1821. This evolution we shall describe more in detail a little later on.

The colleges of the time. Some interest also was taken in college education during this early national period. College attendance, however, was small, as the country was still new and the people were poor. As late as 1815, Harvard graduated a class of but 66; Yale of 69; Princeton of 40; Williams of 40; Pennsylvania of 15; and the University of South Carolina of 37. After the organization of the Union the nine old colonial colleges were reorganized, and an attempt was made to bring them into closer harmony with the ideas and needs of the people and the governments of the States. Dartmouth, Kings (now rechristened Columbia), and Pennsylvania were for a time changed into state institutions, and an unsuccessful attempt was made to make a state university for Virginia out of William and Mary. Fifteen additional colleges were organized by 1800, and fourteen more by 1820. Between 1790 and 1825 there was much discussion as to the desirability of founding a national university at the seat of government, and Washington in his will (1799) left, for that time, a considerable sum to the Nation to inaugurate the new undertaking. Nothing ever came of it, however. Before 1825 six States — Virginia, North Carolina, South Carolina, Georgia, Indiana, and Michigan — had laid the foundations of future state universities. The National Government had also granted to each new Western State two entire townships of land to help endow a university in each — a stimulus which eventually led to the establishment of a state university in every Western State.

A half-century of transition. The first half-century of the national life may be regarded as a period of transition from the church-control idea of education over to the idea of education under the control of and supported by the State. Though many of the early States had provided for state school systems in their constitutions (**R. 259**), the schools had not been set up, or set up only here and there. It required time to make this change in thinking. Up to the period of the beginnings of our national development education had almost everywhere been regarded as an affair of the Church, somewhat akin to baptism, marriage, the administration of the sacraments, and the burial of the dead.

subscriptions from public-spirited citizens.[1] This society did an important work in accustoming the people of the capital city to the provision of some form of free education.

In 1800 "The Philadelphia Society[2] for the Free Instruction of Indigent Boys" was formed, which a little later changed to "The Philadelphia Society for the Establishment and Support of Charity Schools." In 1814 "The Society for the Promotion of a Rational System of Education" was organized in Philadelphia, and four years later the public sentiment awakened by a combination of the work of this Society and the coming of the Lancastrian system of instruction enabled the city to secure a special law permitting Philadelphia to organize a system of city schools for the education of the children of its poor. Other societies which rendered useful educational service include the "Mechanics and Manufacturers Association," of Providence, Rhode Island, organized in 1789 (**Rs. 308, 310**); "The Albany Lancastrian School Society," organized in 1826, for the education of the poor of the city in monitorial schools; and the school societies organized in Savannah in 1818, and Augusta, in 1821, "to afford education to the children of indigent parents." Both these Georgia societies received some support from state funds.

The formation of these school societies, the subscriptions made by the leading men of the cities, the bequests for education, and the grants of some city and state aid to these societies, all of which in time became somewhat common, indicate a slowly rising interest in providing schools for the education of all. This rising interest in education was greatly stimulated by the introduction from England, about this time, of a new and what for the time seemed a wonderful system for the organization of education, the Lancastrian monitorial plan.

The Lancastrian monitorial schools. Church-of-England ideas were not in much favor in the United States for some time after the close of the Revolutionary War, and in consequence it was the Lancastrian plan which was brought over and popularized. In 1806 the first monitorial school was opened in New York City, and, once introduced, the system quickly spread from Massachu-

[1] Thomas Jefferson's name appears in the first subscription list as giving $200, and he was elected a member of the first governing board. The chief sources of support of the schools, which up to 1844 remained pauper schools, were subscriptions, lotteries, a tax on slaves and dogs, certain license fees, and a small appropriation ($1500) each year from the city council.

[2] This organization opened the first schools in Philadelphia for children regardless of religious affiliation, and for thirty-seven years rendered a useful service there.

setts to Georgia, and as far west as Cincinnati, Louisville, and Detroit. In 1826 Maryland instituted a state system of Lancastrian schools, with a Superintendent of Public Instruction, but in 1828 abandoned the idea and discontinued the office. A state Lancastrian system for North Carolina was proposed in 1832, but failed of adoption by the legislature. In 1829 Mexico organized higher Lancastrian schools for the Mexican State of Texas. In 1818 Lancaster himself went to America, and was received with much distinction. Most of the remaining twenty years of his life were spent in organizing and directing schools in various parts of the United States.

In many of the rising cities of the eastern part of the country the first free schools established were Lancastrian schools. The system provided education at so low a cost (p. 629) that it made the education of all for the first time seem possible.[1] The first free schools in Philadelphia (1818) were an outgrowth of Lancastrian influence, as was also the case in many other Pennsylvania cities. Baltimore began a Lancastrian school six years before the organization of public schools was permitted by law. A number of monitorial high schools were organized in different parts of the United States, and it was even proposed that the plan should be adopted in the colleges. A number of New England cities, that already had other type schools, investigated the new monitorial plan and were impressed with its many important points of superiority over methods then in use. The Report of the Investigating Committee (1828) for Boston (**R. 312**), forms a good example of such. As in England, the system was very popular from about 1810 to 1830, but by 1840 its popularity was over.

The interest the new plan awakened. It is not strange that the new plan aroused widespread enthusiasm in many discerning men, and for almost a quarter of a century was advocated as the best system of education then known. Two quotations will illustrate what leading men of the time thought of it. De Witt Clinton, for twenty-one years president of the New York "Free School Society," and later governor of the State, wrote, in 1809:

[1] All at once, comparatively, a new system had been introduced which not only improved but tremendously cheapened education. In 1822 it cost but $1.22 per pupil per year to give instruction in New York City, though by 1844 the per-capita cost, due largely to the decreasing size of the classes, had risen to $2.70, and by 1852 to $5.83. In Philadelphia, in 1817, the expense was $3, as against $12 in the private and church schools. One finds many notices in the newspapers of the time as to the value and low cost of the new system.

When I perceive that many boys in our school have been taught to read and write in two months, who did not before know the alphabet, and that even one has accomplished it in three weeks — when I view all the bearings and tendencies of this system — when I contemplate the habits of order which it forms, the spirit of emulation which it excites, the rapid improvement which it produces, the purity of morals which it inculcates — when I behold the extraordinary union of celerity in instruction and economy of expense — and when I perceive one great assembly of a thousand children, under the eye of a single teacher, marching with unexampled rapidity and with perfect discipline to the goal of knowledge, I confess that I recognize in Lancaster the benefactor of the human race. I consider his system as creating a new era in education, as a blessing sent down from heaven to redeem the poor and distressed of this world from the power and dominion of ignorance.

In a message to the legislature of Connecticut, a State then fairly well supplied with schools of the Massachusetts district type, Governor Wolcott said, in 1825:

If funds can be obtained to defray the expenses of the necessary preparations, I have no doubt that schools on the Lancastrian model ought, as soon as possible, to be established in several parts of this state. Wherever from 200 to 1000 children can be convened within a suitable distance, this mode of instruction in every branch of reading, speaking, penmanship, arithmetic, and bookkeeping, will be found much more efficient, direct, and economical than the practices now generally pursued in our primary schools.

The Lancastrian schools materially hastened the adoption of the free school system in all the Northern States by gradually accustoming people to bearing the necessary taxation which free schools entail. They also made the common school common and much talked of, and awakened thought and provoked discussion on the question of public education. They likewise dignified the work of the teacher by showing the necessity for teacher-training. The Lancastrian Model Schools, first established in the United States in 1818, were the precursors of the American normal schools.

Coming of the Infant School. A curious early condition in America was that, in some of the cities where public schools had been established, by one agency or another, no provision had been made for beginners. These were supposed to obtain the elements of reading at home, or in the Dame Schools. In Boston, for example, where public schools were maintained by the city, no children could be received into the schools who had not learned to read and write (R. 314 a). This made the common age of ad-

mission somewhere near eight years. The same was in part true of Hartford, New York, Philadelphia, Baltimore, and other cities. When the monitorial schools were established they tended to restrict their membership in a similar manner, though not always able to do so.

In 1816 there came to America, also from England, a valuable supplement to education as then known in the form of the so-called Infant Schools (p. 630). First introduced at Boston (**R.** 313), the Infant Schools proved popular, and in 1818 the city appropriated $5000 for the purpose of organizing such schools to supplement the public-school system. These were to admit children at four years of age, were to be known as primary schools, were to be taught by women, were to be open all the year round, and were to prepare the children for admission to the city schools, which by that time had come to be known as English grammar schools. Providence, similarly, established primary (Infant) schools in 1828 for children between the ages of four and eight, to supplement the work of the public schools, there called writing schools.



FIG. 197
"MODEL" SCHOOL BUILDING OF THE PUBLIC SCHOOL SOCIETY

Erected in 1843. Cost (with site), $17,000. A typical New York school building, after 1830. The infant or primary school was on the first floor, the second floor contains the girls' school, and the third floor the boys' school. Each floor had one large room seating 252 children; the primary schoolroom could be divided into two rooms by folding doors, so as to segregate the infant class. This building was for long regarded as the perfection of the builder's art, and its picture was printed for years on the cover of the Society's Annual Reports.

The Dame School absorbed. For New England the establishment of primary schools virtually took over the Dame School instruction as a public function, and added the primary grades to the previously existing school. We have here the origin of the division, often still retained at least in name in the Eastern States, of the "primary grades" and the "grammar grades" of the elementary school.

An "Infant-School Society" was organized in New York, in 1827. The first Infant School was established under the direction of the Public School Society as the "Junior Department" of

School No. 8, with a woman teacher in charge, and using monitorial methods. A second school was established the next year. In 1830 the name was changed from Infant School to Primary Department, and where possible these departments were combined with the existing schools. In 1832 it was decided to organize ten primary schools, under women teachers, for children from four to ten years of age, and after the Boston plan of instruction. This abandoned the monitorial plan of instruction for the new Pestalozzian form, which was deemed better suited to the needs of the smaller children. By 1844 fifty-six Primary Departments had been organized in connection with the upper schools of the city.

In Philadelphia three Infant-School Societies were founded in 1827–28, and such schools were at once established there. By 1830 the directors of the school system had been permitted by the legislature of the State to expend public money for such schools, and thirty such, under women teachers, were in operation in the city by 1837.

Primary education organized. The Infant-School idea was soon somewhat generally adopted by the Eastern cities, and

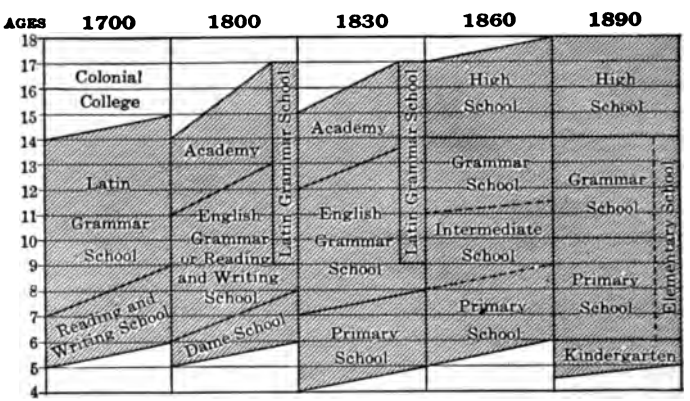


FIG. 198. EVOLUTION OF THE ESSENTIAL FEATURES OF THE AMERICAN PUBLIC SCHOOL SYSTEM

changed somewhat to make of it an American primary school. Where children had not been previously admitted to the schools without knowing how to read, as in Boston, they supplemented the work of the public schools by adding a new school beneath. Where the reverse had been the case, as in New York City, the organization of Infant Schools as Junior Departments enabled the existing schools to advance their work. Everywhere it resulted,

eventually, in the organization of primary and grammar school departments, often with intermediate departments in between, and, with the somewhat contemporaneous evolution of the first high schools, the main outlines of the American free public-school system were now complete.

These four important educational movements — the secular Sunday School, the semi-public city School Societies, the Lancastrian plan for instruction, and the Infant-School idea — all arising in philanthropy, came as successive educational ideas to America during the first half of the nineteenth century, supplemented one another, and together accustomed a new generation to the idea of a common school for all.

III. SOCIAL, POLITICAL, AND ECONOMIC INFLUENCES

It is hardly probable, however, that these philanthropic efforts alone, valuable as they were, could have resulted in the great American battle for tax-supported schools, at as early a date as this took place, had they not been supplemented by a number of other movements of a social, political, and economic character which in themselves materially changed the nature and direction of our national life. The more important of these were: (1) The rise of cities and of manufacturing, (2) the extension of the suffrage, and (3) the rise of new class-demands for schools.

Growth of city population and manufacturing. At the time of the inauguration of the National Government nearly every one in America lived on the farm or in some little village. The first forty years of the national life were essentially an agricultural and a pioneer period. Even as late as 1820 there were but thirteen cities of 8000 inhabitants or over in the whole of the twenty-three States at that time comprising the Union, and these thirteen cities contained but 4.9 per cent of the total population of the Nation.

After about 1825 these conditions began to change. By 1820 many little villages were springing up, and these frequently proved the nuclei for future cities. In New England many of these places were in the vicinity of some waterfall, where cheap power made manufacturing on a large scale possible. Lowell, Massachusetts, which in 1820 did not exist and in 1840 had a population of over twenty thousand people, collected there largely to work in the mills, is a good illustration. Other cities, such as Cincinnati and Detroit, grew because of their advantageous situation as exchange and wholesale centers. With the

revival of trade and commerce after the second war with Great Britain the cities grew rapidly both in number and size.

The rise of the new cities and the rapid growth of the older ones materially changed the nature of the educational problem, by producing an entirely new set of social and educational conditions for the people of the Central and Northern States to solve. The South, with its plantation life, negro slavery, and absence of manufacturing was largely unaffected by these changed conditions until well after the close of the Civil War. In consequence the educational awakening there did not come for nearly half a century after it came in the North. In the cities in the coast States north of Maryland, but particularly in those of New York and New England, manufacturing developed very rapidly. Cotton-spinning in particular became a New England industry, as did also the weaving of wool, while Pennsylvania became the center of the iron manufacturing industries.[1]

The development of this new type of factory work meant the beginnings of the breakdown of the old home and village industries, the eventual abandonment of the age-old apprenticeship system (**Rs. 200, 201**), the start of the cityward movement of the rural population, and the concentration of manufacturing in large establishments, employing many hands to perform continuously certain limited phases of the manufacturing process. This in time was certain to mean a change in educational methods. It also called for the concentration of both capital and labor. The rise of the factory system, business on a large scale, and cheap and rapid transportation, all combined to diminish the importance of agriculture and to change the city from an unimportant to a very important position in our national life. The 13 cities of 1820 increased to 44 by 1840, and to 141 by 1860. There were four times as many cities in the North, too, where manufacturing had found a home, as in the South, which remained essentially agricultural.

New social problems in the cities. The many changes in the nature of industry and of village and home life, effected by the development of the factory system and the concentration of manufacturing and population in the cities, also contributed materi-

[1] The cotton-spinning industry illustrates the rapid growth of manufacturing in the United States. The 15 cotton mills of 1807 had increased to 801, by 1831; and to 1240, by 1840. The South owed its prosperity chiefly to cotton-growing and shipping, and did not develop factories and workshops until a much more recent period.

ally in changing the character of the old educational problem. When the cities were as yet but little villages in size and character, homogeneous in their populations, and the many social and moral problems incident to the congestion of peoples of mixed character had not as yet arisen, the church and charity and private school solution of the educational problem was reasonably satisfactory. As the cities now increased rapidly in size, became more city-like in character, drew to them diverse elements previously largely unknown, and were required by state laws to extend the right of suffrage to all their citizens, the need for a new type of educational organization began slowly but clearly to manifest itself to an increasing number of citizens. The church, charity, and private school system completely broke down under the new strain. School Societies and Educational Associations, organized for propaganda, now arose in the cities; grants of city or state funds for the partial support of both church and society schools were demanded and obtained; and numbers of charity organizations began to be established in the different cities to enable them to handle better the new problems of pauperism, intemperance, and juvenile delinquency which arose.

The extension of the suffrage. The Constitution of the United States, though framed by the ablest men of the time, was framed by men who represented the old aristocratic conception of education and government. The same was true of the conventions which framed practically all the early state constitutions. The early period of the national life was thus characterized by the rule of a class — a very well-educated and a very capable class, to be sure — but a class elected by a ballot based on property qualifications and belonging to the older type of political and social thinking.

Notwithstanding the statements of the Declaration of Independence, the change came but slowly. Up to 1815 but four States had granted the right to vote to all male citizens, regardless of property holdings or other somewhat similar restrictions. After 1815 a democratic movement, which sought to abolish all class rule and all political inequalities, arose and rapidly gained strength. In this the new States to the westward, with their absence of old estates or large fortunes, and where men were judged more on their merits than in an older society, were the leaders. As will be seen from the map, every new State admitted east of the Mississippi River, except Ohio (admitted in 1802), where the

New England element predominated, and Louisiana (1812), provided for full manhood suffrage at the time of its admission to statehood. Seven additional Eastern States had extended the same full voting privileges to their citizens by 1845, while the old requirements had been materially modified in most of the other Northern States. This democratic movement for the leveling of all class distinctions between white men became very marked, after 1820; came to a head in the election of Andrew Jackson as President, in 1828; and the final result was full manhood suffrage in all the States. This gave the farmer in the West and the new manufacturing classes in the cities a preponderating influence in the affairs of government.



FIG. 199. DATES OF THE GRANTING OF FULL MANHOOD SUFFRAGE

Some of the older States granted almost full manhood suffrage at an earlier date, retaining a few minor restrictions until the date given on the map. States shaded granted full suffrage at the time of admission to the Union

Educational significance of the extension of suffrage. The educational significance of the extension of full manhood suffrage to all was enormous and far-reaching.

There now took place in the United States, after about 1825, what took place in England after the passage of the Second Reform Act (p. 642) of 1867. With the extension of the suffrage to all classes of the population, poor as well as rich, laborer, as well as employer, there came to thinking men, often for the first time, a realization that general education had become a fundamental necessity for the State, and that the general education of all in the elements of knowledge and civic virtue must now assume that importance in the minds of the leaders of the State that the education of a few for the service of the Church and of the many for

simple church membership had once held in the minds of ecclesiastics.

This new conception is well expressed in the preamble to the first (optional) school law enacted in Illinois (1825), which declares:

To enjoy our rights and liberties, we must understand them; their security and protection ought to be the first object of a free people; and it is a well-established fact that no nation has ever continued long in the enjoyment of civil and political freedom, which was not both virtuous and enlightened; and believing that the advancement of literature always has been, and ever will be the means of developing more fully the rights of man, that the mind of every citizen in a republic is the common property of society, and constitutes the basis of its strength and happiness; it is therefore considered the peculiar duty of a free government, like ours, to encourage and extend the improvement and cultivation of the intellectual energies of the whole.

Utterances of public men and workingmen. Governors now began to recommend to their legislatures the establishment of tax-supported schools, and public men began to urge state action and state control. An utterance by De Witt Clinton, for nine years governor of New York, may be taken as an example of many. In a message to the legislature, in 1826, defending the schools established, he said:

The first duty of government, and the surest evidence of good government, is the encouragement of education. A general diffusion of knowledge is a precursor and protector of republican institutions, and in it we must confide as the conservative power that will watch over our liberties and guard them against fraud, intrigue, corruption, and violence. I consider the system of our common schools as the palladium of our freedom, for no reasonable apprehension can be entertained of its subversion as long as the great body of the people are enlightened by education.

After about 1825 many labor unions were formed, and the representatives of these new organizations joined in the demands for schools and education, urging the free education of their children as a natural right. In 1829 the workingmen of Philadelphia asked each candidate for the legislature for a formal declaration of the attitude he would assume toward the provision of "an equal and a general system of education" for the State. In 1830 the Workingmen's Committee of Philadelphia submitted a detailed report (R. 315), after five months spent in investigating educational conditions in Pennsylvania, vigorously condemning the lack of provision for education in the State, and the utterly inadequate pro-

vision where any was made. Seth Luther, in an address on "The Education of Workingmen," delivered in 1832, declared that "a large body of human beings are ruined by a neglect of education, rendered miserable in the extreme, and incapable of self-government." Stephen Simpson, in his *A Manual for Workingmen*, published in 1831, declared that "it is to education, therefore, that we must mainly look for redress of that perverted system of society, which dooms the producer to ignorance, to toil, and to penury, to moral degradation, physical want, and social barbarism." Many resolutions were adopted by these organizations demanding free state-supported schools.[1]

IV. ALIGNMENT OF INTERESTS, AND PROPAGANDA

The alignment of interests. The second quarter of the nineteenth century may be said to have witnessed the battle for tax-supported, publicly controlled and directed, and non-sectarian common schools. In 1825 such schools were still the distant hope of statesmen and reformers; in 1850 they had become an actuality in almost every Northern State. The twenty-five years intervening marked a period of public agitation and educational propaganda; of many hard legislative fights; of a struggle to secure desired legislation, and then to hold what had been secured; of many bitter contests with church and private-school interests, which felt that their "vested rights" were being taken from them; and of occasional referenda in which the people were asked, at the next election, to advise the legislature as to what to do. Excepting the battle for the abolition of slavery, perhaps no question has ever been before the American people for settlement which caused so much feeling or aroused such bitter antagonisms. The friends of free schools were at first commonly regarded as fanatics, dangerous to the State, and the opponents of free schools were considered by them as old-time conservatives or as selfish members of society.

Naturally such a bitter discussion of a public question forced an alignment of the people for or against publicly supported and

[1] Among many resolutions adopted by the laboring organizations the following is typical: "At a General Meeting of Mechanics and Workingmen held in New York City, in 1829, it was

"*Resolved*, that next to life and liberty, we consider education the greatest blessing bestowed upon mankind.

"*Resolved*, that the public funds should be appropriated (to a reasonable extent) to the purpose of education upon a regular system that shall insure the opportunity to every individual of obtaining a competent education before he shall have arrived at the age of maturity."

controlled schools, and this alignment of interests may be roughly stated to have been about as follows:

I. For Public Schools.

Men considered as:

1. "Citizens of the Republic."
2. Philanthropists and humanitarians.
3. Public men of large vision.
4. City residents.
5. The intelligent workingmen in the cities.
6. Non-taxpayers.
7. Calvinists.
8. "New England men."

II. Lukewarm, or against Public Schools.

Men considered as:

1. Belonging to the old aristocratic class.
2. The conservatives of society.
3. Politicians of small vision.
4. Residents of rural districts.
5. The ignorant, narrow-minded, and penurious.
6. Taxpayers.
7. Lutherans, Reformed-Church, Mennonites, and Quakers.
8. Southern men.
9. Proprietors of private schools.
10. The non-English-speaking classes.

The work of propaganda. To meet the arguments of the objectors, to change the opinions of a thinking few into the common opinion of the many, to overcome prejudice, and to awaken the public conscience to the public need for free and common schools in such a democratic society, was the work of a generation. To convince the masses of the people that the scheme of state schools was not only practicable, but also the best and most economical means for giving their children the benefits of an education; to convince propertied citizens that taxation for education was in the interests of both public and private welfare; to convince legislators that it was safe to vote for free-school bills; and to overcome the opposition due to apathy, religious jealousies, and private interests, was the work of years. In time, though, the desirability of common, free, tax-supported, non-sectarian, state-controlled schools became evident to a majority of the citizens in the different American States, and as it did the American State School, free and equally open to all, was finally evolved and took its place as the most important institution in the national life working for

the perpetuation of a free democracy and the advancement of the public welfare.

For this work of propaganda hundreds of School Societies and Educational Associations were organized; many conventions were held, and many resolutions favoring state schools were adopted; many "Letters" and "Addresses to the Public" were written and published; public-spirited citizens traveled over the country, making addresses to the people explaining the advantages of free state schools; many public-spirited men gave the best years of their lives to the state-school propaganda; and many governors sent communications on the subject to legislatures not yet convinced as to the desirability of state action. At each meeting of the legislatures for years a deluge of resolutions, memorials, and petitions for and against free schools met the members.

The invention of the steam printing press came at about this time, and the first modern newspapers at a cheap price now appeared. These usually espoused progressive measures, and tremendously influenced public sentiment. Those not closely connected with church or private-school interests usually favored public tax-supported schools.

QUESTIONS FOR DISCUSSION

1. Explain why the development of a national consciousness was practically necessary before an educational consciousness could be awakened.
2. Show why it was natural, suffrage conditions considered, that the early interest should have been in advanced education.
3. Why did the Sunday-School movement prove of so much less usefulness in America than in England?
4. Show the analogy between the earlier school societies for educational work and other forms of modern associative effort.
5. Explain the great popularity of the Lancastrian schools over those previously common in America.
6. What were two of the important contributions of the Infant-School idea to American education?
7. Why are schools and education much more needed in a country experiencing a city and manufacturing development than in a country experiencing an agricultural development?
8. Show how the development of cities caused the old forms of education to break down, and made evident the need for a new type of education.
9. Show how each extension of the suffrage necessitates an extension of educational opportunities and advantages.
10. Explain the alignment of each class, for or against tax-supported schools, on historical and on economic grounds.

SELECTED READINGS

In the accompanying *Book of Readings* the following illustrative selections are reproduced:

307. Fowle: The Schools of Boston about 1790–1815.
308. Rhode Island: Petition for Free Schools, 1799.
309. Providence: Rules and Regulations for the Schools in 1820.
310. Providence: A Memorial for Better Schools, 1837.
311. Bourne: Beginnings of Public Education in New York City.
312. Boston Report: Advantages of the Monitorial System.
313. Wightman: Establishment of Primary Schools in Boston.
314. Boston: The Elementary-School System in 1823.
315. Philadelphia: Report of Workingmen's Committee on Schools.

QUESTIONS ON THE READINGS

1. Just what advantages for boys and for girls existed in Boston (**307 a, b**) before the creation of the reading schools?
2. What improvements and additions did the reading schools (**307 c**) introduce?
3. State the main features of the Rhode Island petition (**308**) of 1799.
4. Just what kind of schools do the Providence regulations (**309**) of 1820 provide for and describe?
5. Despite the many advances made in public schools since the date of the Providence Memorial (**310**), have relative public and private school expenditures materially changed?
6. Compare the New York Public School Society Address (**311**) with the English charity-school organization (**237, 238**) as to purpose and instruction.
7. Show that a report on modern classroom organization would present advantages over the monitorial plan, comparable with those outlined by the Boston Report (**312**) comparing the monitorial and individual plans.
8. Just what does the Boston Report on Primary Schools (**313**) reveal as to the character of education then provided?
9. Just what kind of elementary schools did Boston have (**314**) in 1823?
10. Just what kind of schools existed in the cities of Pennsylvania in 1830, judging from the Report (**315**) of the Workingmen's Committee? Was the Report correct with reference to "a monopoly of talent"?

SUPPLEMENTARY REFERENCES

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*Palmer, A. E. *The New York Public School System.*
*Reigart, J. F. *The Lancastrian System of Instruction in the Schools of New York City.*
*Salmon, David. *Joseph Lancaster.*
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CHAPTER XXVI

THE AMERICAN BATTLE FOR FREE STATE SCHOOLS

THE problem which confronted those interested in establishing state-controlled schools was not exactly the same in any two States, though the battle in many States possessed common elements, and hence was somewhat similar in character. Instead of tracing the struggle in detail in each of the different States, it will be much more profitable for our purposes to pick out the main strategic points in the contest, and then illustrate the conflict for these by describing conditions in one or two States where the controversy was most severe or most typical. The seven strategic points in the struggle for free, tax-supported, non-sectarian, state-controlled schools in the United States were:

1. The battle for tax support.
2. The battle to eliminate the pauper-school idea.
3. The battle to make the schools entirely free.
4. The battle to establish state supervision.
5. The battle to eliminate sectarianism.
6. The battle to extend the system upward.
7. Addition of the state university to crown the system.

We shall consider each of these, briefly, in order.

I. THE BATTLE FOR TAX SUPPORT

Early support and endowment funds. In New England, land endowments, local taxes, direct local appropriations, license taxes, and rate-bills had long been common. Land endowments began early in the New England Colonies, while rate-bills date back to the earliest times and long remained a favorite means of raising money for school support. These means were adopted in the different States after the beginning of our national period, and to them were added a variety of license taxes, while occupational taxes, lotteries, and bank taxes also were employed to raise money for schools. A few examples of these may be cited:

Connecticut, in 1774, turned over all proceeds of liquor licenses to the towns where collected, to be used for schools. New Orleans, in 1826, licensed two theaters on condition that they each pay $3000 annually for the support of schools in the city. New York, in 1799, authorized four state lotteries to raise $100,000 for

schools, a similar amount again in 1801, and numerous other lotteries before 1810. New Jersey (**R. 246**) and most of the other States did the same. Congress passed fourteen joint resolutions, between 1812 and 1836, authorizing lotteries to help support the schools of the city of Washington. Bank taxes were a favorite source of income for schools, between about 1825 and 1860, banks being chartered on condition that they would pay over each year for schools a certain sum or percentage of their earnings. These all represent what is known as indirect taxation, and were valuable in accustoming the people to the idea of public schools without appearing to tax them for their support.

The National Land Grants, begun in the case of Ohio in 1802, soon stimulated a new interest in schools. Each State admitted after Ohio also received the sixteenth section for the support of common schools, and two townships of land for the endowment of a state university. The new Western States, following the lead of Ohio (**R. 260**) and Indiana (**R. 261**), dedicated these section lands and funds to free common schools. The sixteen older States, however, did not share in these grants, so most of them now set about building up a permanent school fund of their own, though at first without any very clear idea as to how the income from the fund was to be used.[1]

The beginnings of school taxation. The early idea, which seems for a time to have been generally entertained, that the income from land grants, license fees, and these permanent endowment funds would in time entirely support the necessary schools, was gradually abandoned as it was seen how little in yearly income these funds and lands really produced, and how rapidly the population of the States was increasing. By 1825 it may be said to have been clearly recognized by thinking men that the only safe reliance of a system of state schools lay in the general and direct taxation of all property for their support. "The wealth of

[1] Connecticut and New York both had set aside lands, before 1800, to create such a fund, Connecticut's fund dating back to 1750. Delaware, in 1796, devoted the income from marriage and tavern licenses to the same purpose, but made no use of the fund for twenty years. Connecticut, in 1795, sold its "Western Reserve" in Ohio for $1,200,000, and added this to its school fund. New York, in 1805, similarly added the proceeds of the sale of half a million acres of state lands, though the fund then formally created accumulated unused until 1812. Tennessee began to build up a permanent state school fund in 1806; Virginia in 1810; South Carolina in 1811; Maryland in 1812; New Jersey in 1816; Georgia in 1817; Maine, New Hampshire, Kentucky, and Louisiana in 1821; Vermont and North Carolina in 1825; Pennsylvania in 1831; and Massachusetts in 1834. These were established as permanent state funds, the annual income only to be used, in some way to be determined later, for the support of some form of schools.

the State must educate the children of the State" became a watchword, and the battle for direct, local, county, and state taxation for education was clearly on by 1825 to 1830 in all the Northern States, except the four in New England where the principle of taxation for education had for long been established.[1] Even in these States the struggle to increase taxation and provide better schools called for much argument and popular education (**R. 316**), and occasional backward movements (**Rs. 317, 318**) were encountered.

The struggle to secure the first legislation, weak and ineffective as it seems to us to-day, was often hard and long. "Campaigns of education" had to be prepared for and carried through. Many thought that tax-supported schools would be dangerous for the State, harmful to individual good, and thoroughly undemocratic. Many did not see the need for schools at all. Portions of a town or a city would provide a free school, while other portions would not. Often those in favor of taxation were bitterly assailed, and even at times threatened with personal violence. Often those in favor of improving the schools had to wait patiently for the opposition slowly to wear itself out (**R. 319**) before any real progress could be made.



FIG. 200. THE FIRST FREE PUBLIC SCHOOL IN DETROIT

A one-room school, opened in the Second Ward, in 1838. No action was taken in any other ward until 1842

State support fixed the state system. With the beginnings of state aid in any substantial sums, either from the income from permanent endowment funds, state appropriations, or direct state

[1] Now for the first time direct taxation for schools was likely to be felt by the taxpayer, and the fight for and against the imposition of such taxation was on in earnest. The course of the struggle and the results were somewhat different in the different States, but, in a general way, the progress of the conflict was somewhat as follows:

1. Permission granted to communities so desiring to organize a school taxing district, and to tax for school support the property of those consenting and residing therein.
2. Taxation of all property in the taxing district permitted.
3. State aid to such districts, at first from the income from permanent endowment funds, and later from the proceeds of a small state appropriation or a state or county tax.
4. Compulsory local taxation to supplement the state or county grant.

taxation, the State became, for the first time, in a position to enforce quite definite requirements in many matters. Communities which would not meet the State's requirements would receive no state funds.

One of the first requirements to be thus enforced was that communities or districts receiving state aid must also levy a local tax for schools. Commonly the requirement was a duplication of state aid. Generally speaking, and recognizing exceptions in a few States, this represents the beginnings of compulsory local taxation for education. As early as 1797 Vermont had required the towns to support their schools on penalty of forfeiting their share of state aid. New York in 1812, Delaware in 1829, and New Jersey in 1846 required a duplication of all state aid received. Wisconsin, in its first constitution of 1848, required a local tax for schools equal to one half the state aid received. The next step in state control was to add still other requirements, as a prerequisite to receiving state aid. One of the first of such was that a certain length of school term, commonly three months, must be provided in each school district. Another was the provision of free heat, and later on free schoolbooks and supplies.

When the duplication-of-state-aid-received stage had been reached, compulsory local taxation for education had been established, and the great central battle for the creation of a state school system had been won. The right to tax for support, and to compel local taxation, was the key to the whole state system of education. From this point on the process of evolving an adequate system of school support in any State has been merely the further education of public opinion to see new educational needs.

II. THE BATTLE TO ELIMINATE THE PAUPER-SCHOOL IDEA

The pauper-school idea. The pauper-school idea was a direct inheritance from England, and its home in America was in the old Central and Southern Colonies, where the old Anglican Church had been in control. New Jersey, Pennsylvania, Delaware, Maryland, Virginia, and Georgia were the chief representatives, though the idea had friends among certain classes of the population in other of the older States. The new and democratic West would not tolerate it. The pauper-school conception was a direct inheritance from English rule, belonged to a society based on classes, and was wholly out of place in a Republic founded on the doctrine that "all men are created equal, and endowed by

their Creator with certain unalienable rights." Still more, it was a very dangerous conception of education for a democratic form of government to tolerate or to foster. Its friends were found among the old aristocratic or conservative classes, the heavy taxpayers, the supporters of church schools, and the proprietors of private schools. Citizens who had caught the spirit of the new Republic, public men of large vision, intelligent workingmen, and men of the New England type of thinking were opposed on principle to a plan which drew such invidious distinctions between the future citizens of the State. To educate part of the children in church or private pay schools, they said, and to segregate those too poor to pay tuition and educate them at public expense in pauper schools, often with the brand of pauper made very evident to them, was certain to create classes in society which in time would prove a serious danger to our democratic institutions.

Large numbers of those for whom the pauper schools were intended would not brand themselves as paupers by sending their children to the schools, and others who accepted the advantages offered, for the sake of their children, despised the system.[1]

The battle for the elimination of the pauper-school idea was fought out in the North in the States of Pennsylvania and New Jersey, and the struggle in these two States we shall now briefly describe.

The Pennsylvania legislation. In Pennsylvania we find the pauper-school idea fully developed. The constitution of 1790 (**R. 259**) had provided for a state system of pauper schools, but nothing was done to carry even this constitutional direction into effect until 1802. A pauper-school law was then enacted, directing the overseers of the poor to notify such parents as they deemed sufficiently indigent that, if they would declare themselves to be paupers, their children might be sent to some specified private or pay school and be given free education (**R. 315**). The expense for this was assessed against the education

[1] Concerning the system, "The Philadelphia Society for the Establishment and Support of Charity Schools," in an "Address to the Public," in 1818, said:

"In the United States the benevolence of the inhabitants has led to the establishment of Charity Schools, which, though affording individual advantages, are not likely to be followed by the political benefits kindly contemplated by their founders. In the country a parent will raise children in ignorance rather than place them in charity schools. It is only in large cities that charity schools succeed to any extent. These dispositions may be improved to the best advantage, by the Legislature, in place of Charity Schools, establishing Public Schools for the education of all children, the offspring of the rich and the poor alike."

poor-fund, which was levied and collected in the same manner as were road taxes or taxes for poor relief. No provision was made for the establishment of public schools, even for the children of the poor, nor was any standard set for the education to be provided in the schools to which they were sent. No other general provision for elementary education was made in the State until 1834.

With the growth of the cities, and the rise of their special problems, something more than this very inadequate provision for schooling became necessary. "The Philadelphia Society for the Establishment and Support of Charity Schools" had long been urging a better system, and in 1814 "The Society for the Promotion of a Rational System of Education" was organized in Philadelphia for the purpose of educational propaganda. Bills were prepared and pushed, and in 1818 Philadelphia was permitted, by special law, to organize as "the first school district" in the State of Pennsylvania, and to provide, with its own funds, a system of Lancastrian schools for the education of the children of its poor.[1]

The Law of 1834. In 1827 "The Pennsylvania Society for the Promotion of Public Schools" began an educational propaganda which did much to bring about the Free-School Act of 1834. In an "Address to the Public" it declared its object to be the promotion of public education throughout the State of Pennsylvania, and the "Address" closed with these words:

> This Society is at present composed of about 250 members, and a correspondence has been commenced with 125 members, who reside in every district in the State. It is intended to direct the continued attention of the public to the importance of the subject; to collect and diffuse all information which may be deemed valuable; and to persevere in their labors until they shall be crowned with success.

Memorials were presented to the legislature year after year, governors were interested, "Addresses to the Public" were prepared, and a vigorous propaganda was kept up until the Free-School Law of 1834 was the result.

This law, though, was optional. It created every ward, township, and borough in the State a school district, a total of 987 being created for the State. Each school district was ordered to vote that autumn on the acceptance or rejection of the law. Those accepting the law were to organize under its provisions,

[1] In 1821 the counties of Dauphin (Harrisburg), Allegheny (Pittsburg), Cumberland (Carlisle), and Lancaster (Lancaster) were also exempted from the state pauper-school law, and allowed to organize schools for the education of the children of their poor.

while those rejecting the law were to continue under the educational provisions of the old Pauper-School Act.

The results of the school elections of 1834 are shown, by counties, on the below map. Of the total of 987 districts created, 502, in 46 of the then 52 counties (Philadelphia County not voting), or

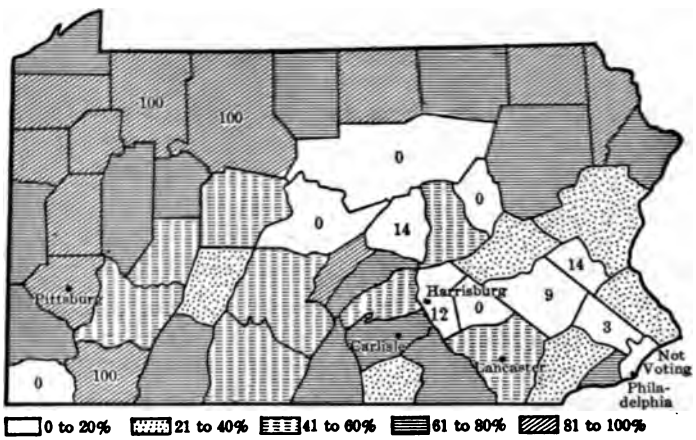


FIG. 201. THE PENNSYLVANIA SCHOOL ELECTIONS of 1835

Showing the percentage of school districts in each county organizing under and accepting the School Law of 1834. Percentage of districts accepting indicated on the map for a few of the counties.

52 per cent of the whole number, voted to accept the new law and organize under it; 264 districts, in 31 counties, or 27 per cent of the whole, voted definitely to reject the law; and 221 districts, in 46 counties, or 21 per cent of the whole, refused to take any action either way. In 3 counties, indicated on the map, every district accepted the law, and in 5 counties, also indicated, every district rejected or refused to act on the law. It was the predominantly German counties, located in the east-central portion of the State, which were strongest in their opposition to the new law. One reason for this was that the new law provided for English schools; another was the objection of the thrifty Germans to taxation; and another was the fear that the new state schools might injure their German parochial schools.

The real fight for free *versus* pauper schools, though, was yet to come. Legislators who had voted for the law were bitterly assailed, and, though it was but an optional law, the question of its repeal and the reinstatement of the old Pauper-School Law be-

came the burning issue of the campaign in the autumn of 1834. Many legislators who had favored the law were defeated for re-election. Others, seeing defeat, refused to run. Petitions for the repeal of the law,[1] and remonstrances against its repeal, flooded the legislature when it met. The Senate at once repealed the law, but the House, largely under the leadership of a Vermonter by the name of Thaddeus Stevens,[2] refused to reconsider, and finally forced the Senate to accept an amended and a still stronger bill. This defeat finally settled, in principle at least, the pauper-school question in Pennsylvania,[3] though it was not until 1873 that the last district in the State accepted the new system.

Eliminating the pauper-school idea in New Jersey. No constitutional mention of education was made in New Jersey until 1844, and no educational legislation was passed until 1816. In that year a permanent state school fund was begun, and in 1820 the first permission to levy taxes "for the education of such poor children as are paupers" was granted. In 1828 an extensive investigation showed that one third of the children of the State were without educational opportunities, and as a result of this investigation the first general school law for the State was enacted, in 1829. This provided for district schools, school trustees and visitation, licensed teachers, local taxation, and made a state appropriation of $20,000 a year to help establish the system. The next year, however, this law was repealed and the old pauper-school plan reëstablished, largely due to the pressure of church and private-school interests. In 1830 and 1831 the state appropriation was made divisible among private and parochial schools, as well as the public pauper schools, and the use of all public money was limited "to the education of the children of the poor."

Between 1828 and 1838 a number of conventions of friends of free public schools were held in the State, and much work in the nature of propaganda was done. At a convention in 1838 a committee was appointed to prepare an "Address to the People of New Jersey" on the educational needs of the State (**R. 320**), and

[1] Some 32,000 persons petitioned for a repeal of the law, 66 of whom signed by making their mark, and "not more than five names in a hundred," reported a legislative committee which investigated the matter, "were signed in English script." It was from among the parochial-school Germans that the strongest opposition to the law came.

[2] For Stevens's speech in defense of the Law of 1834, see *Report of the United States Commissioner of Education*, 1898–99, vol. II. pp. 516–24.

[3] By 1836 the new free-school law had been accepted by 75 per cent of the districts in the State, by 1838 by 84 per cent, and by 1847 by 88 per cent.

speakers were sent over the State to talk to the people on the subject. The campaign against the pauper school had just been fought to a conclusion in Pennsylvania, and the result of the appeal in New Jersey was such a popular manifestation in favor of free schools that the legislature of 1838 instituted a partial state school system. The pauper-school laws were repealed, and the best features of the short-lived Law of 1829 were reënacted. In 1844 a new state constitution limited the income of the permanent state school fund exclusively to the support of public schools.

With the pauper-school idea eliminated from Pennsylvania and New Jersey, the North was through with it. The wisdom of its elimination soon became evident, and we hear little more of it among Northern people. The democratic West never tolerated it. It continued some time longer in Maryland, Virginia, and Georgia, and at places for a time in other Southern States, but finally disappeared in the South as well in the educational reorganizations which took place following the close of the Civil War.

III. THE BATTLE TO MAKE THE SCHOOLS ENTIRELY FREE

The schools not yet free. The rate-bill, as we have previously stated, was an old institution, also brought over from England, as the term "rate" signifies. It was a charge levied upon the parent to supplement the school revenues and prolong the school term, and was assessed in proportion to the number of children sent by each parent to the school. In some States, as for example Massachusetts and Connecticut, its use went back to colonial times; in others it was added as the cost for education increased, and it was seen that the income from permanent funds and authorized taxation was not sufficient to maintain the school the necessary length of time. The deficiency in revenue was charged against the parents sending children to school, *pro rata*, and collected as ordinary tax-bills (**R. 321**). The charge was small, but it was sufficient to keep many poor children away from the schools.

The rising cities, with their new social problems, could not and would not tolerate the rate-bill system, and one by one they secured special laws from legislatures which enabled them to organize a city school system, separate from city-council control, and under a local "board of education." One of the provisions of these special laws nearly always was the right to levy a city tax for schools sufficient to provide free education for the children of the city.

The fight against the rate-bill in New York. The attempt to abolish the rate-bill and make the schools wholly free was most vigorously contested in New York State, and the contest there is most easily described. From 1828 to 1868, this tax on the parents produced an average annual sum of $410,685.66, or about one half of the sum paid all the teachers of the State for salary. While the wealthy districts were securing special legislation and

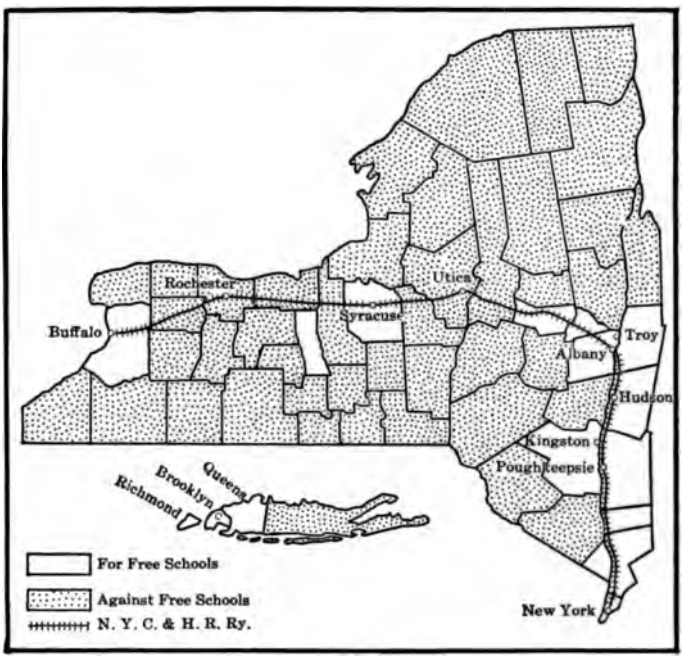


FIG. 202. THE NEW YORK REFERENDUM OF 1850
Total vote: For free schools, 17 counties and 209,346 voters; against free schools, 42 counties and 184,308 voters.

taxing themselves to provide free schools for their children, the poorer and less populous districts were left to struggle to maintain their schools the four months each year necessary to secure state aid. Finally, after much agitation, and a number of appeals to the legislature to assume the rate-bill charges in the form of general state taxation, and thus make the schools entirely free, the legislature, in 1849, referred the matter back to the people to be voted on at the elections that autumn. The legislature was to be thus advised by the people as to what action it should take.

The result was a state-wide campaign for free, public, tax-supported schools, as against partially free, rate-bill schools.

The result of the 1849 election was a vote of 249,872 in favor of making "the property of the State educate the children of the State," and 91,952 against it. This only seemed to stir the opponents of free schools to renewed action, and they induced the next legislature to resubmit the question for another vote, in the autumn of 1850.

The result of the referendum of 1850 is shown on the map on page 685. The opponents of tax-supported schools now mustered their full strength, doubling their vote in 1849, while the majority for free schools was materially cut down. The interesting thing shown on this map was the clear and unmistakable voice of the cities. They would not tolerate the rate-bill, and, despite their larger property interests, they favored tax-supported free schools. The rural districts, on the other hand, opposed the idea.

The rate-bill in other States. These two referenda virtually settled the question in New York, though for a time a compromise was adopted. The state appropriation for schools was very materially increased, the rate-bill was retained, and the organization of "union districts" to provide free schools by local taxation where people desired them was authorized. Many of these "union free districts" now arose in the more progressive communities of the State, and finally, in 1867, after rural and other forms of opposition had largely subsided, and after almost all the older States had abandoned the plan, the New York legislature finally abolished the rate-bill and made the schools of New York entirely free.

The dates for the abolition of the rate-bill in the other older Northern States were:

1834. Pennsylvania.
1852. Indiana.
1853. Ohio.
1855. Illinois.
1864. Vermont.
1867. New York.
1868. Connecticut.
1868. Rhode Island.
1869. Michigan.
1871. New Jersey.

The New York fight of 1849 and 1850 was the pivotal fight; in the other States it was abandoned by legislative act, and without a serious contest. In the Southern States free education came with the educational reorganizations following the close of the Civil War.

IV. THE BATTLE TO ESTABLISH SCHOOL SUPERVISION

Beginnings of state control. The great battle for state schools was not only for taxation to stimulate their development where none existed, but was also indirectly a battle for some form of state control of the local systems which had already grown up. The establishment of permanent state school funds by the older States, to supplement any other aid which might be granted, also tended toward the establishment of some form of state supervision and control of the local school systems. The first step was the establishment of some form of state aid; the next was the imposing of conditions necessary to secure this state aid.

State oversight and control, however, does not exercise itself, and it soon became evident that the States must elect or appoint some officer to represent the State and enforce the observance of its demands. It would be primarily his duty to see that the laws relating to schools were carried out, that statistics as to existing conditions were collected and printed, and that communities were properly advised as to their duties and the legislature as to the needs of the State. We find now the creation of a series of school officers to represent the State, the enactment of new laws extending control, and a struggle to integrate, subordinate, and reduce to some semblance of a state school system the hundreds of little community school systems which had grown up.

The first state school officers. The first American State to create a state officer to exercise supervision over its schools was New York, in 1812. In enacting the new law [1] providing for state aid for schools the first State Superintendent of Common Schools in the United States was created. So far as is known this was a distinctively American creation, uninfluenced by the practice in any other land. It was to be the duty of this officer to look after the establishment and maintenance of the schools throughout the State.[2] Maryland created the office in 1826, but two years later abolished it and did not re-create it until 1864. Illinois directed

[1] This State had enacted an experimental school law, and made an annual state grant for schools, from 1795 to 1800. Then, unable to reënact the law, the system was allowed to lapse and was not reëstablished until the New England element gained control, in 1812.

[2] By his vigorous work in behalf of schools the first appointee, Gideon Hawley, gave such offense to the politicians of the time that he was removed from office, in 1821, and the legislature then abolished the position and designated the Secretary of State to act, *ex officio*, as Superintendent. This condition continued until 1854, when New York again created the separate office of Superintendent of Public Instruction.

its Secretary of State to act, *ex officio*, as Superintendent of Schools in 1825, as did also Vermont in 1827, Louisiana in 1833, Pennsylvania in 1834, and Tennessee in 1835. Illinois did not create a real State Superintendent of Schools, though, until 1854, Vermont until 1845, Louisiana until 1847, Pennsylvania until 1857, or Tennessee until 1867. The first States to create separate school officials who have been continued to the present time were Michigan and Kentucky, both in 1837. Often quite a legislative struggle took place to secure the establishment of the office, and later on to prevent its abolition.

By 1850 there were *ex-officio* state school officers in nine and regular school officers in seven of the then thirty-one States, and

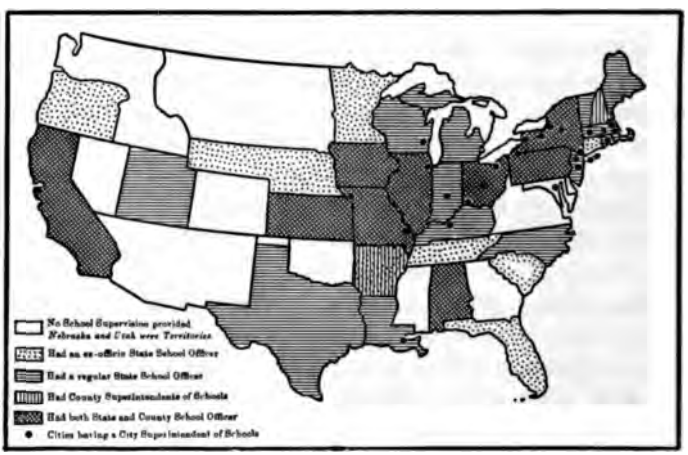


FIG. 203. STATUS OF SCHOOL SUPERVISION IN THE UNITED STATES BY 1861

For a list of the 28 City Superintendencies established up to 1870, see Cubberley's *Public School Administration*, p. 58. For the history of the state educational office in each State see Cubberley and Elliott, *State and County School Administration, Source Book*, pp. 283–87.

by 1861 there were *ex-officio* officers in nine and regular officers in nineteen of the then thirty-four States, as well as one of each in two of the organized Territories. The above map shows the growth of supervisory oversight by 1861 — forty-nine years from the time the first American state school officer was created. The map also shows the ten of the thirty-four States which had, by 1861, also created the office of County Superintendent of Schools, as well as the twenty-five cities which had, by 1861, created the office of City Superintendent of Schools. Only three more cities

— Albany, Washington, and Kansas City — were added before 1870, making a total of twenty-eight, but since that date the number of city superintendents has increased to something like fourteen hundred to-day.

The first State Board of Education. Another important form for state control which was created a little later was the State Board of Education, with an appointed Secretary, who exercised about the same functions as a State Superintendent of Schools. This form of organization first arose in Massachusetts, in 1837, in an effort to subordinate the district schools and reduce them to a semblance of an organized system. In 1826 each town (township) had been required to appoint a School Committee (School Board) to exercise general supervision over its schools, in 1834 the state permanent school fund was created, and in 1837 the reform movement reached its culmination in the creation of the first real State Board of Education in the United States. Instead of following the usual American practice of the time, and providing for an elected State School Superintendent, Massachusetts provided for a small appointed State Board of Education which in turn was to select a Secretary, who was to act in the capacity of a state school officer and report to the Board, and through it to the legislature and the people. Neither the Board nor the Secretary were given any powers of compulsion, their work being to investigate conditions, report facts, expose defects, and make recommendations as to action to the legislature. The permanence and influence of the Board thus depended very largely on the character of the Secretary it selected.

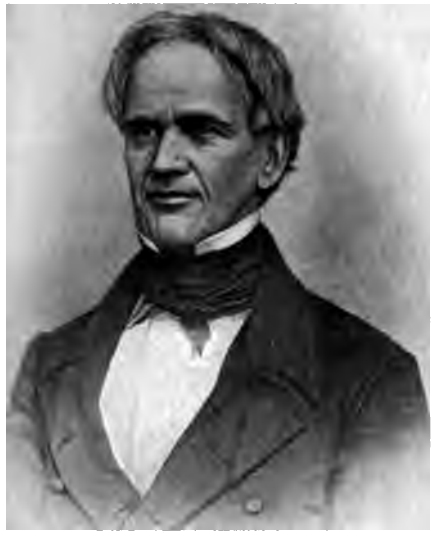
Horace Mann the first Secretary. A prominent Brown University graduate and lawyer in the State Senate, by the name of Horace Mann (1796–1859), who as president of the Senate had been of much assistance in securing passage of the bill creating the State Board of Education, was finally induced by the Governor and the Board to accept the position of Secretary. Mr. Mann now began a most memorable work of educating public opinion, and soon became the acknowledged leader in school organization in the United States. State after State called upon him for advice and counsel, while his twelve annual *Reports* to the State Board of Education will always remain memorable documents. Public men of all classes — lawyers, clergymen, college professors, literary men, teachers — were laid under tribute and sent forth over the State explaining to the people the need for a reawakening

of educational interest in Massachusetts. Every year Mr. Mann organized a "campaign," to explain to the people the meaning and importance of general education. So successful was he, and so ripe was the time for such a movement, that he not only started a great common school revival in Massachusetts which led to the regeneration of the schools there, but one which was felt and which influenced development in every Northern State.

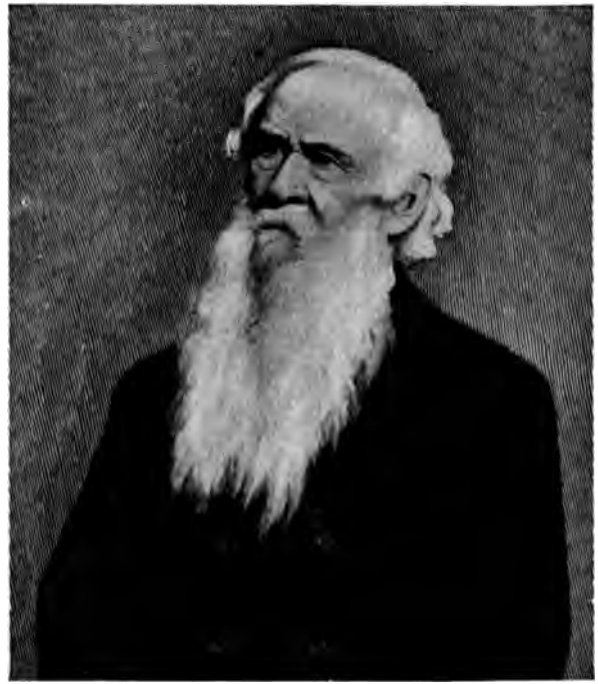
His twelve carefully written *Reports* on the condition of education in Massachusetts and elsewhere, with his intelligent discussion of the aims and purposes of public education, occupy a commanding place in the history of American education, while he will always be regarded as perhaps the greatest of the "founders" of our American system of free public schools. No one did more than he to establish in the minds of the American people the conception that education should be universal, non-sectarian, and free, and that its aim should be social efficiency, civic virtue, and character, rather than mere learning or the advancement of sectarian ends. Under his practical leadership an unorganized and heterogeneous series of community school systems was reduced to organization and welded together into a state school system, and the people of Massachusetts were effectively recalled to their ancient belief in and duty toward the education of the people.

Henry Barnard in Connecticut and Rhode Island. Almost equally important, though of a somewhat different character, was the work of Henry Barnard (1811–1900) in Connecticut and Rhode Island. A graduate of Yale, and also educated for the law, he turned aside to teach and became deeply interested in education. The years 1835–37 he spent in Europe studying schools, particularly the work of Pestalozzi's disciples. On his return to America he was elected a member of the Connecticut legislature, and at once formulated and secured passage of the Connecticut law (1839) providing for a State Board of Commissioners for Common Schools, with a Secretary, after the Massachusetts plan. Mr. Barnard was then elected as its first Secretary, and reluctantly gave up the law and accepted the position at the munificent salary of $3 a day and expenses. Until the legislature abolished both the Board and the position, in 1842, he rendered for Connecticut a service scarcely less important than the better-known reforms which Horace Mann was at that time carrying on in Massachusetts.

In 1843 he was called to Rhode Island to examine and report



HORACE MANN (1796–1859)
(From a painting at the Westfield, Massachusetts, Normal School)



HENRY BARNARD (1811–1900)
(From a picture taken about 1890)

PLATE 5. TWO LEADERS IN THE EDUCATIONAL AWAKENING IN THE UNITED STATES



upon the existing schools, and from 1845 to 1849 acted as State Commissioner of Public Schools there, where he rendered a service similar to that previously rendered in Connecticut. In addition he organized a series of town libraries throughout the State. For his teachers' institutes he devised a traveling model school, to give demonstration lessons in the art of teaching. From 1851 to 1855 he was again in Connecticut, as principal of the newly established state normal school and *ex-officio* Secretary of the Connecticut State Board of Education. He now rewrote the school laws, increased taxation for schools, checked the power of the districts, there known as "school societies," and laid the foundations of a state system of schools. The work of Mann and Barnard had its influence throughout all the Northern States, and encouraged the friends of education everywhere. Almost contemporaneous with them were leaders in other States who helped fight through the battles of state establishment and state organization and control, and the period of their labors has since been termed the period of the "great awakening."

V. THE BATTLE TO ELIMINATE SECTARIANISM

The secularization of American education. The Church, it will be remembered, was from the earliest colonial times in possession of the education of the young. Not only were the earliest schools controlled by the Church and dominated by the religious motive, but the right of the Church to dictate the teaching in the schools was clearly recognized by the State. Still more, the State looked to the Church to provide the necessary education, and assisted it in doing so by donations of land and money. The minister, as a town official, naturally examined the teachers and the instruction in the schools. After the establishment of the National Government this relationship for a time continued.[1] New York and the New England States specifically set aside lands to help both church and school. After about 1800 these land endowments for religion ceased, but grants of state aid for religious schools continued for nearly a half-century longer. Then it became common for a town or city to build a schoolhouse from city taxation, and let it out rent-free to any responsible person who

[1] When Connecticut sold its Western Reserve, in 1795, and added the sum to the Connecticut school fund, it was stated to be for the aid of "schools and the gospel." In the sales of the first national lands in Ohio (1,500,000 acres to The Ohio Company, in 1787; and 1,000,000 acres in the Symmes Purchase, near Cincinnati, in 1788), section 16 in each township was reserved and given as an endowment for schools, and section 29 "for the purposes of religion."

would conduct a tuition school in it, with a few free places for selected poor children. Still later, with the rise of the state schools, it became quite common to take over church and private schools and aid them on the same basis as the new state schools.

In colonial times, too, and for some decades into our national period, the warmest advocates of the establishment of schools were those who had in view the needs of the Church. Then gradually the emphasis shifted to the needs of the State, and a new class of advocates of public education now arose. Still later the emphasis has been shifted to industrial and civic and national needs, and the religious aim has been almost completely eliminated. This change is known as the secularization of American education. It also required many a bitter struggle, and was accomplished in the different States but slowly. The two great factors which served to produce this change were:

1. The conviction that the life of the Republic demanded an educated and intelligent citizenship, and hence the general education of all in common schools controlled by the State; and
2. The great diversity of religious beliefs among the people, which forced tolerance and religious freedom through a consideration of the rights of minorities.

The secularization of education must not be regarded either as a deliberate or a wanton violation of the rights of the Church, but rather as an unavoidable incident connected with the coming to self-consciousness and self-government of a great people.

The fight in Massachusetts. The educational awakening in Massachusetts, brought on largely by the work of Horace Mann, was to many a rude awakening. Among other things, it revealed that the old school of the Puritans had gradually been replaced by a new and purely American type of school, with instruction adapted to democratic and national rather than religious ends. Mr. Mann stood strongly for such a conception of public education, and being a Unitarian, and the new State Board of Education being almost entirely liberal in religion, an attack was launched against them, and for the first time in our history the cry was raised that "The public schools are Godless schools." Those who believed in the old system of religious instruction, those who bore the Board or its Secretary personal ill-will, and those who desired to break down the Board's authority and stop the development of the public schools, united their forces in this first big attack against secular education. Horace Mann was the

first prominent educator in America to meet and answer the religious onslaught.

A violent attack was opened in both the pulpit and the press. It was claimed that the Board was trying to eliminate the Bible from the schools, to abolish correction, and to "make the schools a counterpoise to religious instruction at home and in Sabbath schools." The local right to demand religious instruction was insisted upon.

Mr. Mann felt that a great public issue had been raised which should be answered carefully and fully. In three public statements he answered the criticisms and pointed out the errors in the argument (**R. 322**). The Bible, he said, was an invaluable book for forming the character of children, and should be read without comment in the schools, but it was not necessary to teach it there. He showed that most of the towns had given up the teaching of the Catechism before the establishment of the Board of Education. He contended that any attempt to decide what creed or doctrine should be taught would mean the ruin of the schools. The attack culminated in the attempts of the religious forces to abolish the State Board of Education, in the legislatures of 1840 and 1841, which failed dismally. Most of the orthodox people of the State took Mr. Mann's side, and Governor Briggs, in one of his messages, commended his stand by inserting the following:

> Justice to a faithful public officer leads me to say that the indefatigable and accomplished Secretary of the Board of Education has performed services in the cause of common schools which will earn him the lasting gratitude of the generation to which he belongs.

The attempt to divide the school funds. As was stated earlier, in the beginning it was common to aid church schools on the same basis as the state schools, and sometimes, in the beginnings of state aid, the money was distributed among existing schools without at first establishing any public schools. In many Eastern cities church schools at first shared in the public funds. In Pennsylvania church and private schools were aided from poor-law funds up to 1834. In New Jersey the first general school law of 1829 had been repealed a year later through the united efforts of church and private-school interests, who unitedly fought the development of state schools, and in 1830 and 1831 new laws had permitted all private and parochial schools to share in the small state appropriation for education.

After the beginning of the forties, when the Roman Catholic in-

fluence came in strongly with the increase in Irish immigration to the United States, a new factor was introduced and the problem, which had previously been a Protestant problem, took on a somewhat different aspect in the form of a demand for a division of the school funds. Between 1825 and 1842 the fight was especially severe in New York City. In 1825 the City Council refused to grant public money to any religious Society,[1] and in 1840 the Catholics carried the matter to the State Legislature.

The legislature deferred action until 1842, and then did the unexpected thing. The heated discussion of the question in the city and in the legislature had made it evident that, while it might not be desirable to continue to give funds to a privately organized corporation, to divide them among the quarreling and envious religious sects would be much worse. The result was that the legislature created for the city a City Board of Education, to establish real public schools, and stopped the debate on the question of aid to religious schools by enacting that no portion of the school funds was in the future to be given to any school in which "any religious sectarian doctrine or tenet should be taught, inculcated, or practiced." Thus the real public-school system of New York City was evolved out of this attempt to divide the public funds among the churches. The Public School Society continued for a time, but its work was now done, and, in 1853, it surrendered its buildings and property to the City Board of Education and disbanded.

The contest in other States. As early as 1830, Lowell, Massachusetts, had granted aid to the Irish Catholic parochial schools in the city, and in 1835 had taken over two such schools and maintained them as public schools. In 1853 the representatives of the Roman Catholic Church made a demand on the state legislature for a division of the school fund of the State. To settle the question once for all a constitutional amendment was submitted by the legislature to the people, providing that all state and town moneys raised or appropriated for education must be expended only on regularly organized and conducted public schools, and that no religious sect should ever share in such funds. This measure failed of adoption at the election of 1853 by a vote of

[1] The Public School Society continued to receive money grants, it being regarded as a non-denominational organization, though chartered to teach "the sublime truths of religion and morality contained in the Holy Scriptures" in its schools. In 1828 the Society was even permitted to levy a local tax to supplement its resources, it being estimated that at that time there were 10,000 children in the city with no opportunities for education.

65,111 for and 65,512 against, but was re-proposed and adopted in 1855. This settled the question in Massachusetts, as Mann had tried to settle it earlier, and as New Hampshire had settled it in its constitution of 1792, Connecticut in its constitution of 1818, and Rhode Island in its constitution of 1842.

Other States now faced similar demands, but no demand for a share in or a division of the public-school funds, after 1840, was successful. The demand everywhere met with intense opposition, and with the coming of enormous numbers of Irish Catholics after 1846, and German Lutherans after 1848, the question of the preservation of the schools just established as unified state school systems now became a burning one. Petitions for a division of the funds deluged the legislatures (**R. 323**), and these were met by counter-petitions (**R. 324**). Mass meetings on both sides of the question were held. Candidates for office were forced to declare themselves. Anti-Catholic riots occurred in a number of cities. The Native-American Party was formed, in 1841, "to prevent the union of Church and State," and to "keep the Bible in the schools." In 1841 the Whig Party, in New York, inserted a plank in its platform against sectarian schools. In 1855 the national council of the Know-Nothing Party, meeting in Philadelphia, in its platform favored public schools and the use of the Bible therein, but opposed sectarian schools. This party carried the elections that year in Massachusetts, New Hampshire, Connecticut, Rhode Island, Maryland, and Kentucky.

To settle the question in a final manner legislatures now began to propose constitutional amendments to the people of their several States which forbade a division or a diversion of the funds, and these were almost uniformly adopted at the first election after being proposed. No State admitted to the Union after 1858, except West Virginia, failed to insert such a provision in its first state constitition.[1]

VI. THE BATTLE TO ESTABLISH THE AMERICAN HIGH SCHOOL

The elementary or common schools which had been established in the different States, by 1850, supplied an elementary or common school education to the children of the masses of the people,

[1] The question may be regarded as a settled one in our American States. Our people mean to keep the public-school system united as one state school system, well realizing that any attempt to divide the schools among the different religious denominations (the *World Almanac* for 1917 lists 49 different denominations and 171 different sects in the United States) could only lead to inefficiency and educational chaos.

and the primary schools which were added, after about 1820, carried this education downward to the needs of the beginners. In the rural schools the American school of the 3 Rs provided for all the children, from the little ones up, so long as they could advantageously partake of its instruction. Education in advance of this common school training was in semi-private institutions — the academies and colleges — in which a tuition fee was charged. The next struggle came in the attempt to extend the system upward so as to provide to pupils, free of charge, a more complete education than the common schools afforded.

The transition Academy. About the middle of the eighteenth century a tendency manifested itself, in Europe as well as in America, to establish higher schools offering a more practical curriculum than the old Latin schools had provided. In America it became particularly evident, after the coming of nationality, that the old Latin grammar-school type of instruction, with its limited curriculum and exclusively college-preparatory ends, was wholly inadequate for the needs of the youth of the land. The result was the gradual dying-out of the Latin school and the evolution of the tuition Academy, previously referred to briefly on page 463.



FIG. 204. A TYPICAL NEW ENGLAND ACADEMY
Pittsfield Academy, New Hampshire.

The academy movement spread rapidly during the first half of the nineteenth century. By 1800 there were 17 academies in Massachusetts, 36 by 1820, and 403 by 1850. By 1830 there were, according to Hinsdale, 950 incorporated academies in the United States, and many unincorporated ones, and by 1850, according to Inglis, there were, of all kinds, 1007 academies in New England, 1636 in the Middle Atlantic States, 2640 in the Southern States, 753 in the Upper Mississippi Valley States, and a total reported for the entire United States of 6085, with 12,260 teachers employed and 263,096 pupils enrolled.[1] The greatest period of

[1] The movement gained a firm hold everywhere east of the Missouri River, the States incorporating the largest number being New York with 887, Pennsylvania with 524, Massachusetts with 403, Kentucky with 330, Virginia with 317, North Carolina with 272, and Tennessee with 264. Some States, as Kentucky and Indiana,

their development was from 1820 to 1830, though they continued to dominate secondary education until 1850, and were very prominent until after the Civil War.

Characteristic features. The most characteristic features of these academies were their semi-public control (**R. 325**), their broadened curriculum and religious purpose, and the extension of their instruction to girls. The Latin Grammar School was essentially a town free school, maintained by the towns for the higher education of certain of their male children. It was aristocratic in type, and belonged to the early period of class education. With the decline in zeal for education, after 1750, these tax-supported higher schools largely died out, and in their place private energy and benevolence came to be depended upon to supply the needed higher education.

One of the main purposes expressed in the endowment or creation of the academies was the establishment of courses which should cover a number of subjects having value aside from mere preparation for college, particularly subjects of a modern nature, useful in preparing youths for the changed conditions of society and government and business. The study of real things rather than words about things, and useful things rather than subjects merely preparatory to college, became prominent features of the new courses of study. Among the most commonly found new subjects were algebra, astronomy, botany, chemistry, general history, United States history, English literature, surveying, intellectual philosophy, declamation, and debating.[1]

Not being bound up with the colleges, as the earlier Latin grammar schools had largely been, the academies became primarily independent institutions, taking pupils who had completed the English education of the common school and giving them an advanced education in modern languages, the sciences, mathematics, history, and the more useful subjects of the time, with a view to "rounding out" their studies and preparing them for business

provided for a system of county academies, while many States extended to them some form of state aid. In New York State they found a warm advocate in Governor De Witt Clinton, who urged (1827) that they be located at the county towns of the State to give a practical scientific education suited to the wants of farmers, merchants, and mechanics, and also to train teachers for the schools of the State.

[1] The new emphasis given to the study of English, mathematics, and book-science is noticeable. New subjects appeared in proportion as the academies increased in numbers and importance. Of 149 new subjects for study appearing in the academies of New York, between 1787 and 1870, 23 appeared before 1826, 100 between 1826 and 1840, and 26 after 1840. Between 1825 and 1828 one half of the new subjects appeared. This also was the maximum period of development of the academies.

life and the rising professions. They thus built upon instead of running parallel to the common school course, as the old Latin grammar school had done (see Figure 198, p. 666) and hence clearly mark a transition from the aristocratic and somewhat exclusive college-preparatory Latin grammar school of colonial times to the more democratic high school of to-day. The academies also served a very useful purpose in supplying to the lower schools the best-educated teachers of the time.

The old Latin grammar school, too, had been maintained exclusively for boys. Girls had been excluded as "Improper & inconsistent wth such a Grammar Schoole as y^{e} law injoines, and is y^{e} Designe of this Settlem^{t}." The new academies soon reversed this situation. Almost from the first they began to be established for girls as well as boys, and in time many became co-educational. In New York State alone 32 academies were incorporated between 1819 and 1853 with the prefix "Female" to their title. In this respect, also, these institutions formed a transition to the modern co-educational high school. The higher education of women in the United States clearly dates from the establishment of the academies. Troy (New York) Seminary, founded by Emma Willard, in 1821, and Mt. Holyoke (Massachusetts) Seminary, founded by Mary Lyon, in 1836, though not the first institutions for girls, were nevertheless important pioneers in the higher education of women.

The demand for higher schools. The different movements tending toward the building-up of free public-school systems in the cities and States, which we have described in this and the preceding chapter, and which became clearly defined in the Northern States after 1825, came just at the time when the Academy had reached its maximum development. The settlement of the question of general taxation for education, the elimination of the rate-bill by the cities and later by the States, the establishment of the American common school as the result of a long native evolution, and the complete establishment of public control over the entire elementary-school system, all tended to bring the semi-private tuition academy into question. Many asked why not extend the public-school system upward to provide the necessary higher education for all in one common state-supported school.[1]

[1] The existence of a number of colleges, basing their entrance requirements on the completion of the classical course of the academy, and the establishment of a few embryo state universities in the new States of the West and the South, naturally raised the further question of why there should be a gap in the public-school sys-

The demand for an upward extension of the public school, which would provide academy instruction for the poor as well as the rich, and in one common public higher school, now made itself felt. As the colonial Latin grammar school had represented the

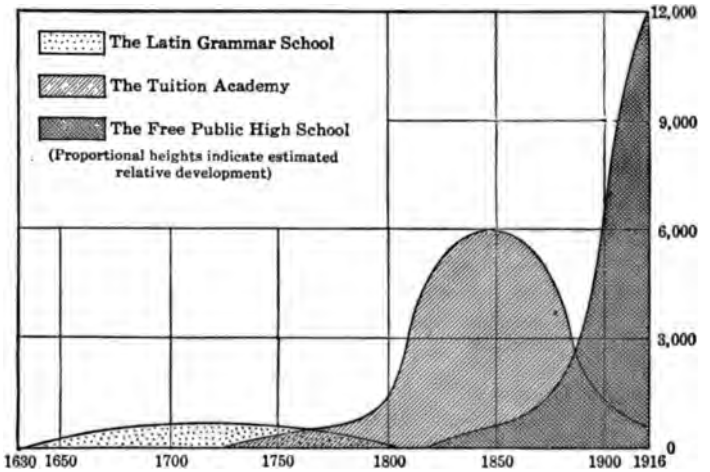


FIG. 205. THE DEVELOPMENT OF SECONDARY SCHOOLS IN THE UNITED STATES

The transitional character of the Academy is well shown in this diagram.

educational needs of a society based on classes, and the academies had represented a transition period and marked the growth of a middle class, so the rising democracy of the second quarter of the nineteenth century now demanded and obtained the democratic high school, supported by the public and equally open to all, to meet the educational needs of a new society built on the basis of a new and aggressive democracy. Where, too, the academy had represented in a way a missionary effort — that of a few providing something for the good of the people (**Rs. 319, 325**) — the high school on the other hand represented a coöperative effort on the part of the people to provide something for themselves.

The first American high school. The first high school in the United States was established in Boston, in 1821 (**R. 326**). For three years it was known as the "English Classical School"

tem. The increase of wealth in the cities tended to increase the number who passed through the elementary course and could profit by more extended education; the academies had popularized the idea of more advanced education; while the new manufacturing and commercial activities of the time called for more training than the elementary schools afforded, and of a different type from that demanded by the small colleges of the time for entrance.

(R. 327), but in 1824 the school appears in the records as the "English High School." In 1826 Boston also opened the first high school for girls, but abolished it in 1828, due to its great popularity, and instead extended the course of study for girls in the elementary schools.

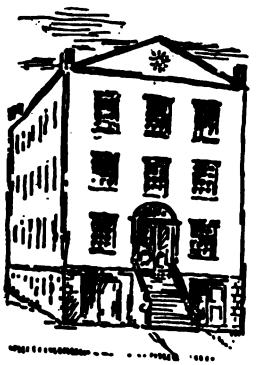


FIG. 206
THE FIRST HIGH SCHOOL IN THE UNITED STATES
Established at Boston in 1821

The Massachusetts Law of 1827. Though Portland, Maine, established a high school in 1821, Worcester, Massachusetts, in 1824, and New Bedford, Haverhill, and Salem, Massachusetts, in 1827, copying the Boston idea, the real beginning of the American high school as a distinct institution dates from the Massachusetts Law of 1827 (R. 328), enacted through the influence of James G. Carter. This law formed the basis of all subsequent legislation in Massachusetts, and deeply influenced development in other States. The law is significant in that it required a high school in every town having 500 families or over, in which should be taught United States history, bookkeeping, algebra, geometry, and surveying, while in every town having 4000 inhabitants or over, instruction in Greek, Latin, history, rhetoric, and logic must be added. A heavy penalty was attached for failure to comply with the law. In 1835 the law was amended so as to permit any smaller town to form a high school as well.

This Boston and Massachusetts legislation clearly initiated the public high-school movement in the United States. It was there that the new type of higher school was founded, there that its curriculum was outlined, there that its standards were established, and there that it developed earliest and best.

The struggle to establish and maintain high schools. The development of the American high school, even in its home, was slow. Up to 1840 not much more than a dozen high schools had been established in Massachusetts, and not more than an equal number in the other States. The Academy was the dominant institution, the cost of maintenance was a factor, and the same opposition to an extension of taxation to include high schools was manifested as was earlier shown toward the establishment of common schools. The early state legislation, as had been the case

with the common schools, was nearly always permissive and not mandatory. Massachusetts forms a notable exception in this regard. The support for the schools had to come practically entirely from increased local taxation, and this made the struggle to establish and maintain high schools in any State for a long time a series of local struggles. Years of propaganda and patient effort were required, and, after the establishment of a high school in a community, constant watchfulness was necessary to prevent its abandonment (**R. 329**).

In many States, legislation providing for the establishment of high schools was attacked in the courts. One of the clearest cases

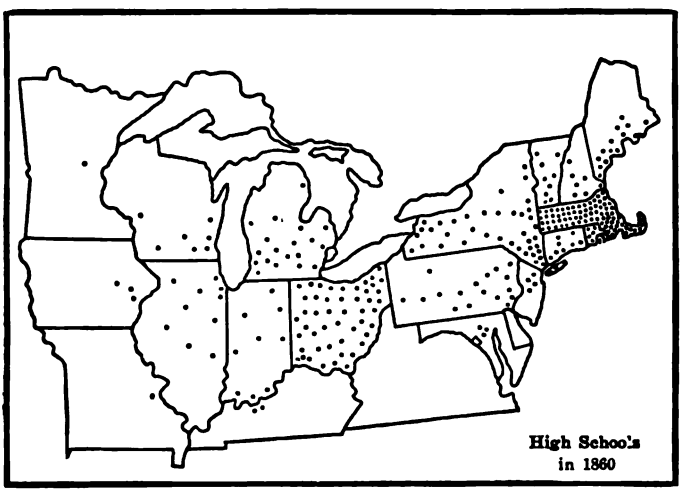


FIG. 207. HIGH SCHOOLS IN THE UNITED STATES BY 1860

Based on the table given in the *Report of the United States Commissioner of Education*, 1904, vol. II, pp. 1782–1989. This table is only approximately correct, as exact information is difficult to obtain. This table gives 321 high schools by 1860, and all but 35 of these were in the States shown on the above map. There were two schools in California and three in Texas, and the remainder not shown were in the Southern States. Of the 321 high schools reported, over half (167) were in the three States of Massachusetts (78), New York (41), and Ohio (48).

of this came in Michigan, in a test case appealed from the city of Kalamazoo, and commonly known as the Kalamazoo case. The opinion of the Supreme Court of the State (**R. 330**) was so favorable and so positive that this decision deeply influenced development in almost all of the Upper Mississippi Valley States.

The struggle to establish and maintain high schools in Massa-

chusetts and New York preceded the development in most other States, because there the common school had been established earlier. In consequence, the struggle to extend and complete the public-school system came there earlier also. The development was likewise more peaceful there, and came more rapidly. In Massachusetts this was in large part a result of the educational awakening started by James G. Carter and Horace Mann. In New York it was due to the early support of Governor De Witt Clinton, and the later encouragement and state aid which came from the Regents of the University of the State of New York. Maine, Vermont, and New Hampshire were like Massachusetts in spirit, and followed closely its example. In Rhode Island and New Jersey, due to old conditions, and in Connecticut, due to the great decline in education there after 1800, the high school developed much more slowly, and it was not until after 1865 that any marked development took place in these States. The democratic West soon adopted the idea, and established high schools as soon as cities developed and the needs of the population warranted. In the South the main high-school development dates from relatively recent times.

Gradually the high school has been accepted as a part of the state common-school system by all the American States, and the funds and taxation originally provided for the common schools have been extended to cover the high school as well. The new States of the West have based their legislation largely on what the Eastern and Central States earlier fought out.

VII. THE STATE UNIVERSITY CROWNS THE SYSTEM

The colonial colleges. The earlier colleges — Harvard, William and Mary, Yale — had been created by the religious-state governments of the earlier colonial period, and continued to retain some state connections for a time after the coming of nationality. As it early became evident that a democracy demands intelligence on the part of its citizens, that the leaders of democracy are not likely to be too highly educated, and that the character of collegiate instruction must ultimately influence national development, efforts were accordingly made to change the old colleges or create new ones, the final outcome of which was the creation of state universities in all the new and in most of the older States. The evolution of the state university, as the crowning head of the free public school system of the State, represents the last phase which

we shall trace of the struggle of democracy to create a system of schools suited to its peculiar needs.

The close of the colonial period found the Colonies possessed of nine colleges. These, with the dates of their foundation, the Colony founding them, and the religious denomination they chiefly represented were:

1636.	Harvard College	Massachusetts	Puritan
1693.	William and Mary	Virginia	Anglican
1701.	Yale College	Connecticut	Congregational
1746.	Princeton	New Jersey	Presbyterian
1753–55.	Academy and College	Pennsylvania	Non-denominational
1754.	King's College (Columbia)	New York	Anglican
1764.	Brown	Rhode Island	Baptist
1766.	Rutgers	New Jersey	Reformed Dutch
1769.	Dartmouth	New Hampshire	Congregational

The religious purpose had been dominant in the founding of each institution, though there was a gradual shading-off in strict denominational control and insistence upon religious conformity in the foundations after 1750. Still the prime purpose in the founding of each was to train up a learned and godly body of ministers, the earlier congregations at least "dreading to leave an illiterate ministry to the churches when our present ministers shall lie in the dust." In a pamphlet, published in 1754, President Clap of Yale declared that "Colleges are *Societies of Ministers*, for training up Persons for the Work of the *Ministry*," and that "The great design of founding this School (Yale), was to Educate Ministers in our *own Way*." In the advertisement published in the New York papers announcing the opening of King's College, in 1754, it was stated that:

> IV. The chief Thing that is aimed at in this College, is, to teach and engage the Children *to know God in Jesus Christ*, and to love and serve him in all *Sobriety*, *Godliness*, and *Richness* of Life, with a perfect Heart and a Willing Mind: and to train them up in all Virtuous Habits, and all such useful Knowledge as may render them creditable to their Families and Friends, Ornaments to their Country, and useful to the Public Weal in their generation.

These colonial institutions were all small. For the first fifty years of Harvard's history the attendance at the college seldom exceeded twenty, and the President did all the teaching. The first assistant teacher (tutor) was not appointed until 1699, and the first professor not until 1721, when a professorship of divinity was endowed. By 1800 the instruction was conducted by the President and three professors — divinity, mathematics, and

"Oriental languages" — assisted by a few tutors who received only class fees, and the graduating classes seldom exceeded forty. The course was four years in length, and all students studied the same subjects. The first three years were given largely to the so-called "Oriental languages" — Hebrew, Greek, and Latin. In addition, Freshmen studied arithmetic; Sophomores, algebra, geometry, and trigonometry; and Juniors, natural (book) science; and all were given much training in oratory, and some general history was added. The Senior year was given mainly to ethics, philosophy, and Christian evidences.[1] The instruction in the eight other older colleges, before 1800, was not materially different.

Growth of colleges by 1860. Fifteen additional colleges were founded before 1800, and it has been estimated that by that date the two dozen American colleges then existing did not have all told over one hundred professors and instructors, not less than

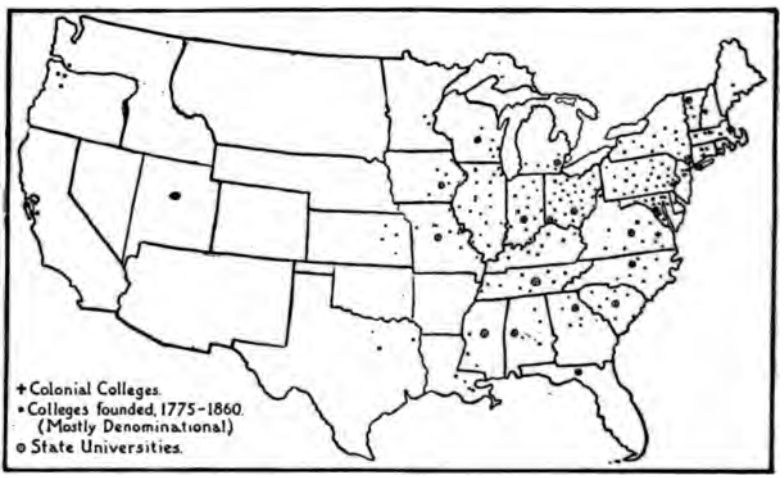


FIG. 208. COLLEGES AND UNIVERSITIES ESTABLISHED BY 1860

Compiled from data given in the *Reports of the United States Commissioner of Education*. Of the 246 colleges shown on the map, but 17 were state institutions, and but two or three others had any state connections.

one thousand nor more than two thousand students, or property worth over one million dollars. Their graduating classes were small. No one of the twenty-four admitted women in any way to its privileges. After 1820, with the firmer establishment of the

[1] For an interesting table showing the simple entrance requirements of Harvard in 1642, 1734, 1803, 1825, 1850, 1875, and 1885, see *Report of the United States Commissioner of Education*, 1902, vol. I, pp. 930–33.

Nation, the awakening of a new national consciousness, the development of larger national wealth, and a court decision (p. 706) which safeguarded the endowments, interest in the founding of new colleges perceptibly quickened, as may be seen from the adjoining table, and between 1820 and 1880 came the great period of denominational effort. The map shows the colleges established by 1860, from which it will be seen how large a part the denominational colleges played in the early history of higher education in the United States. Up to about 1870 the provision of higher education, as had been the case earlier with the provision of secondary education by the academies, had been left largely to private effort. There were, to be sure, a few state universities before 1870, though usually these were not better than the denominational colleges around them, and often they maintained a non-denominational character only by preserving a proper balance between the different denominations in the employment of their faculties. Speaking generally, higher education in the United States before 1870 was provided very largely in the tuitional colleges of the different religious denominations, rather [illegible]. Of the 246 colleges founded by the close of [illegible] on the map, but 17 were state institutions. [illegible] others had any state connections.

Before 1780	[illegible]
1780–89	[illegible]
1790–99	[illegible]
1800 09	[illegible]
1810–19	[illegible]
1820–29	[illegible]
1830 39	[illegible]
1840 49	[illegible]
1850 59	[illegible]
1860 69	[illegible]
1870 79	[illegible]
1880 89	[illegible]
1890 99	[illegible]
Total	[illegible]

[illegible]
(After a table of [illegible] by U. S. Commissioner [illegible] provisional [illegible]

The new national attitude toward the [illegible] ing of nationality there gradually grew [illegible] faction with the colleges as then [illegible] aristocratic in tendency, because [illegible] exclusively to the needs of a class [illegible] answer the needs of the States in [illegible] Due to their religious origin, and [illegible] the president and trustees must [illegible] denomination, they were naturally [illegible] interests of some one sect or [illegible] the interests of the State itself. [illegible] ic [illegible] r about [illegible]

New England and most in the South and the new States in the West, for institutions of higher learning which should represent the State. It was argued that colleges were important instrumentalities for moulding the future, that the kind of education given in them must ultimately influence the welfare of the State, and that higher education cannot be regarded as a private matter. The type of education given in these higher institutions, it was argued, "will appear on the bench, at the bar, in the pulpit, and in the senate, and will unavoidably affect our civil and religious principles." For these reasons, as well as to crown our state school system and to provide higher educational advantages for its leaders, it was argued that the State should exercise control over the colleges.

This new national spirit manifested itself in a number of ways. In New York we see it in the reorganization of King's College, the rechristening of the institution as Columbia, and the placing of it under at least the nominal supervision of the governing educational body of the State. In Pennsylvania an attempt was made to bring the university into closer connection with the State, but this failed. In New Hampshire the legislature tried, in 1816, to transform Dartmouth College into a state institution. This act was contested in the courts, and the case was finally carried to the Supreme Court of the United States. There it was decided, in 1819, that the charter of a college was a contract, the obligation of which a legislature could not impair.

Effect of the Dartmouth College decision. The effect of this decision manifested itself in two different ways. On the one hand it guaranteed the perpetuity of endowments, and the great period of private and denominational effort (see table, p. 705) now followed. On the other hand, since the States could not change charters and transform old establishments, they began to turn to the creation of new state universities of their own. Virginia created its state university the same year as the Dartmouth case decision. The University of North Carolina, which had been established in 1789, and which began to give instruction in 1795, but which had never been under direct state control, was taken over by the State in 1821. The University of Vermont, originally chartered in 1791, was rechartered as a state university in 1838. The University of Indiana was established in 1820. Alabama provided for a state university in its first constitution, in 1819, and the institution opened for instruction in 1831. Michigan, in

framing its first constitution preparatory to entering the Union, in 1835, made careful provisions for the safeguarding of the state university and for establishing it as an integral part of its state school system, as Indiana had done in 1816. Wisconsin provided for the creation of a state university in 1836, and embodied the idea in its first constitution when it entered the Union in 1848, and Missouri provided for a state university in 1839, Mississippi in 1844, Iowa in 1847, and Florida in 1856. The state university is to-day found in every "new" State and in some of the "original" States, and practically every new Western and Southern State followed the patterns set by Indiana, Michigan, and Wisconsin and made careful provision for the establishment and maintenance of a state university in its first state constitution.

There was thus quietly added another new section to the American educational ladder, and the free public-school system was extended farther upward. Though the great period of state university foundation came after 1860, and the great period of state university expansion after 1885, the beginnings were clearly marked early in our national history. Of the sixteen States having state universities by 1860 (see Figure 208), all except Florida had established them before 1850. For a long time small, poorly supported by the States, much like the church colleges about them in character and often inferior in quality, one by one the state universities have freed themselves alike from denominational restrictions on the one hand and political control on the other, and have set about rendering the service to the State which a state university ought to render. Michigan, the first of our state universities to free itself, take its proper place, and set an example for others to follow, opened in 1841 with two professors and six students. In 1844 it was a little institution of three professors, one tutor, one assistant, and one visiting lecturer, had but fifty-three students, and offered but a single course of study, consisting chiefly of Greek, Latin, mathematics, and intellectual and moral science (**R.** 331). As late as 1852 it had but seventy-two students, but by 1860, when it had largely freed itself from the incubus of Baptist Latin, Congregational Greek, Methodist intellectual philosophy, Presbyterian astronomy, and Whig mathematics, and its remarkable growth as a state university had begun, it enrolled five hundred and nineteen.

The American free public-school system now established. By the close of the second quarter of the nineteenth century, certainly

by 1860, we find the American public-school system fully established, in principle at least, in all our Northern States (**R. 332**). Much yet remained to be done to carry into full effect what had been established in principle, but everywhere democracy had won its fight, and the American public school, supported by general taxation, freed from the pauper-school taint, free and equally open to all, under the direction of representatives of the people, free from sectarian control, and complete from the primary school through the high school, and in the Western States through the university as well, was established permanently in American public policy. It was a real democratic educational ladder that had been created, and not the typical two-class school system of continental European States. The establishment of the free public high school and the state university represent the crowning achievements of those who struggled to found a state-supported educational system fitted to the needs of great democratic States. Probably no other influences have done more to unify the American people, reconcile diverse points of view, eliminate state jealousies, set ideals for the people, and train leaders for the service of the States and of the Nation than the academies, high schools, and colleges scattered over the land. They have educated but a small percentage of the people, to be sure, but they have trained most of the leaders who have guided the American democracy since its birth.

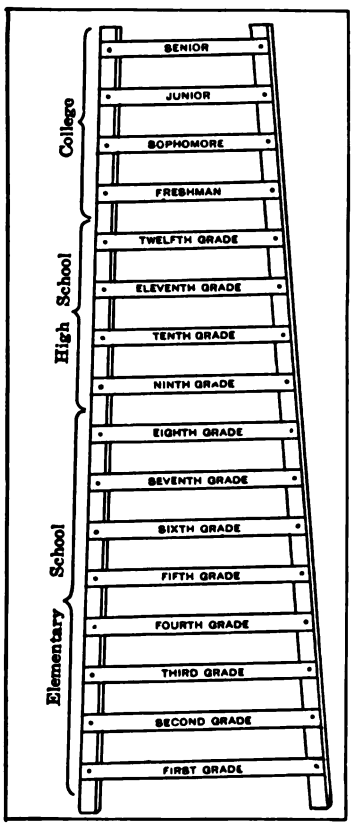


FIG. 209. THE AMERICAN EDUCATIONAL LADDER

Compare this with the figure on page 577, and the democratic nature of the American school system will be apparent.

QUESTIONS FOR DISCUSSION

1. Explain the theory of "vested rights" as applied to private and parochial schools.
2. Does every great advance in provisions for human welfare require a period of education and propaganda? Illustrate.
3. Explain just what is meant by "the wealth of the State must educate the children of the State."
4. Show how the retention of the pauper-school idea would have been dangerous to the life of the Republic.
5. Why were the cities more anxious to escape from the operation of the pauper-school law than were the towns and rural districts?
6. Why were the pauper-school and the rate-bill so hard to eliminate?
7. Explain why, in America, schools naturally developed from the community outward.
8. State your explanation for the older States beginning to establish permanent school funds, often before they had established a state system of schools.
9. Show the gradual transition from church control of education, through state aid of church schools, to secularized state schools.
10. Show why secularized state schools were the only possible solution for the United States.
11. Show that secularization would naturally take place in the textbooks and the instruction, before manifesting itself in the laws.
12. Show how the American academy was a natural development in the national life.
13. Show how the American high school was a natural development after the academy.
14. Show why the high school could be opposed by men who had accepted tax-supported elementary schools. Why has such reasoning been abandoned now?
15. Explain the difference, and illustrate from the history of American educational development, between establishing a thing in principle and carrying it into full effect.
16. Was the early argument as to the influence of higher education on the State a true argument? Why?
17. What would have been the probable results had the Dartmouth College case been decided the other way?
18. Show how the opening of collegiate instruction to women was a phase of the new democratic movement.
19. Show how college education has been a unifying force in the national life.

SELECTED READINGS

In the accompanying *Book of Readings* the following illustrative selections are reproduced:

316. Mann: The Ground of the Free-School System.
317. Governor Cleveland: Repeal of the Connecticut School Law.
318. Mann: On the Repeal of the Connecticut School Law.
319. Gulliver: The Struggle for Free Schools in Norwich.
320. Address: The State and Education.
321. Michigan: A Rate-Bill, and a Warrant for Collection.
322. Mann: On Religious Instruction in the Schools.
323. Michigan: Petition for a Division of the School Fund.

324. Michigan: Counter-Petition against a Division.
325. Connecticut: Act of Incorporation of Norwich Free Academy.
326. Boston: Establishment of the First American High School.
327. Boston: The Secondary-School System in 1823.
328. Massachusetts: The High School Law of 1827.
329. Gulliver: An Example of the Opposition to High Schools.
330. Michigan: The Kalamazoo Decision.
331. Michigan: Program of Studies at University, 1843.
332. Tappan: The Michigan State System of Public Instruction.

QUESTIONS ON THE READINGS

1. Do Mann's three propositions (**316**) hold equally true to-day?
2. Of what type of person is the reasoning of Governor Cleveland (**317**) typical?
3. Assuming Mann's description of Connecticut progress (**318**) to be correct, how do you account for the legislature following Governor Cleveland's recommendations so readily?
4. Did the leaders in Norwich (**319**) use good diplomacy?
5. Point out the essential soundness of the reasoning of the New Jersey Report (**320**).
6. Explain the willingness of people seventy-five years ago to conduct the school business on such a small basis (**321**) as the rate-bill indicates.
7. Show that, as Mr. Mann points out (**322**), sectarian schools and a State Church are near together.
8. Point out the weakness in the argument in the Michigan petition (**323**).
9. State the purpose and nature of the first American high school (**326**), and contrast it with the earlier academy.
10. Contrast the English Classical School (High School) of Boston of 1823, with the older Latin School (**327**), as to purpose and instruction.
11. Just what did the Massachusetts Law of 1827 (**328**) require?
12. Has such opposition as that described in **329** completely died out even now?
13. State the line of reasoning and the conclusions of the Court in the Kalamazoo Case (**330**). Point out how this decision might influence development elsewhere.
14. Compare the University of Michigan of 1843 (**331**) with a present-day high school.
15. Show that Michigan (**332**) had perfected an American educational ladder.

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CHAPTER XXVII

EDUCATION BECOMES A NATIONAL TOOL

I. SPREAD OF THE STATE-CONTROL IDEA

The five type nations. We have now traced, in some detail, the struggles of forward-looking men to establish national systems of education in five great world nations. In each we have described the steps by means of which the State gradually superseded the Church in the control of education, and the motives and impulses which finally led the State to take over the school as a function of the State. The steps and impelling motives and rate of transfer were not the same in any two nations, but in each of the five the political necessities of the State in time made the transfer seem desirable. Time everywhere was required to effect the change. The movement began earliest and was concluded earliest in the German States, and was concluded last in England. In the German States, France, and Italy the change came rapidly and as a result of legislative acts or imperial decrees. In England and the United States the transfer took place, as we have seen, only in response to the slow development of public opinion.

This change in control and extension of educational advantages was essentially a nineteenth-century movement, and a resultant of the new political philosophy and the democratic revolutions of the later eighteenth century, combined with the industrial revolution of the nineteenth century. A new political impulse now replaced the earlier religious motive as the incentive for education, and education for literacy and citizenship became, during the nineteenth century, a new political ideal that has, in time, spread to progressive nations all over the world.

The five great nations whose educational evolution has been described in the preceding chapters may be regarded as having formed types which have since been copied, in more or less detail, by the more progressive nations in different parts of the world. The continental European two-class school system, the American educational ladder, and the English tendency to combine the two and use the best parts of each, have been reproduced in the different national educational systems which have been created by the various political governments of the world. The continental

European idea of a centralized ministry for education, with an appointed head or a cabinet minister in control, has also been widely copied. The Prussian two-class plan has been most influential among the Teutonic and Slavic peoples of Europe, and has also deeply influenced educational development among the Japanese; English ideas have been extensively copied in the English self-governing dominions; and the American plan has been clearly influential in Canada, the Argentine, and in China. The French centralized plan for organization and administration has been widely copied in the state educational organizations of the Latin nations of Europe and South America. In a general way it may be stated that the more democratic the government of a nation has become the greater has been the tendency to break away from the two-class school system, to introduce more of an educational ladder, and to bring in more of the English conception of granting to localities a reasonable amount of local liberty in educational affairs.

Spread of the state-control idea among northern nations. The development of schools under the control of the government, and the extension of state supervision to the existing religious schools, took place in the different cantons of Switzerland, and in Holland, Denmark, Norway, and Sweden, somewhat contemporaneously with the development described for the five type nations. The work of Pestalozzi and Fellenberg, and of their disciples and followers, had given an early impetus to the establishment of schools and teacher-training in the Swiss cantons, most being done in the German-speaking portions.

In Holland, where the Reformation zeal for schools largely died out in the eighteenth century, the organization of the "Society of Public Good," in 1784, by a Mennonite clergyman, did much to awaken a new interest in schools for the people and to inaugurate a new movement for educational organization. In 1795 a revolution took place in Holland, a republic was established, and the extension of educational advantages followed. From 1806 to 1815 Holland was under the rule of Napoleon. A school law of 1806 forms the basis of public education in Holland. This asserted the supremacy of the State in education, and provided for state inspection of schools. In 1812 the French scientist, M. Cuvier, reported to Napoleon that there were 4451 schools in little Holland, and that one tenth of the total population was in school. In 1816 a normal school was established at Haarlem.

Both the constitutions of 1815 and 1848 provided for state control of education, which has been steadily extended since the beginning of the revival in 1784. To-day Holland provides a good system of public instruction for its people.

In Denmark and Sweden the development of state schools has been worked out, much as in England, in coöperation with the Church, and the Church still assists the State in the administration and supervision of the school systems which were eventually evolved. In each of these countries, too, the continental two-class school system has been somewhat modified by an upward movement of the transfer point between the two and the development of people's high schools, so as to produce a more democratic type of school and afford better educational opportunities to all classes of the population. The annexed diagram, showing the organization of education in Denmark, is typical of this modification and extension.

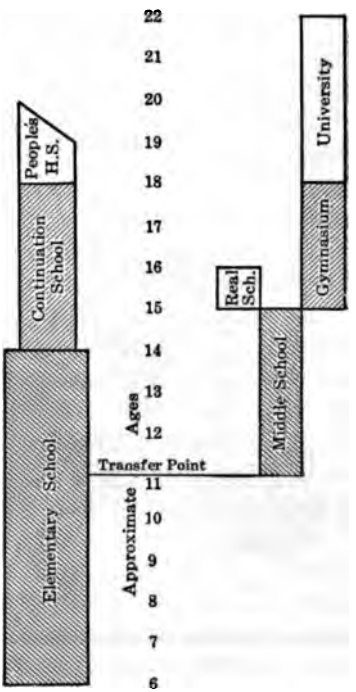


FIG. 210. THE SCHOOL SYSTEM OF DENMARK

Finland should also be classed with these northern nations in matters of educational development. Lutheran ideas as to religion and the need for education took deep hold there at an early date (p. 297). A knowledge of reading and the Catechism was made necessary for confirmation as early as 1686, and democratic ideas also found an early home among this people. In consequence the Finns have for long been a literate people. The law making elementary education a function of the State, however, dates only from 1866, and secondary education was taken over from the ecclesiastical authorities only in 1872.

Similarly, Scotland, another northern nation, began schools as a phase of its Reformation fervor. During the eighteenth century the parish schools, created by the Acts of 1646 (R. 179;

p. 335) and 1696, proved insufficient, and voluntary schools were added to supplement them. Together these insured for Scotland a much higher degree of literacy than was the case in England. The final state organization of education in Scotland dates from the Scottish Education Act of 1872.

The map reproduced here, showing the progress of general education by the close of the nineteenth century, as measured by



FIG. 211. THE PROGRESS OF LITERACY IN EUROPE BY THE CLOSE OF THE NINETEENTH CENTURY

the spread of the ability to read and write, reveals at a glance the high degree of literacy of the northern Teutonic and mixed Teutonic nations. It was among these nations that the Protestant Reformation ideas made the deepest impression; it was in these northern States that the Protestant elementary vernacular school, to teach reading and religion, attained its earliest start; it was there that the school was taken over from the Church and erected into an effective national instrument at an early date; and it was these nations which had been most successful, by the close of the nineteenth century, in extending the elements of education to all and thus producing literate populations.

The state-control idea in the south and east of Europe. As we pass to the south and east of Europe we pass not only to lands which remained loyal to the Roman Church, or are adherents of the Greek Church, and hence did not experience the Reformation fervor with its accompanying zeal for education, but also to lands untouched by the French-Revolution movement and where democratic ideas have only recently begun to make any progress. Greece alone forms an exception to this statement, a constitutional government having been established there in 1843. Removed from the main stream of European civilization, these nations have been influenced less by modern forces; the hold of the Church on the education of the young has there been longest retained; and the taking-over of education by the State has there been longest deferred. In consequence, the schools provided have for long been inadequate both in number and scope, and the progress of literacy and democratic ideas among the people has been slow.

Despite the beginnings made by Maria Theresa (p. 475) in the late eighteenth century, Austria dropped backward to a low place in matters of education during the period of reaction following the Napoleonic wars, and the real beginnings of state elementary-schools there date from the law of 1867. The beginnings in Hungary date from 1868. The beginnings of other state elementary school systems are: Greece, 1823; Portugal, 1844; Spain, 1857; Roumania, 1859; Bulgaria, 1881; and Serbia, 1882. In many of these States, despite early beginnings, but little real progress has even yet been made in developing systems of national education that will provide gratuitous elementary-school training for all and inculcate the national spirit. In many of these States the illiteracy of the people is still high,[1] the people are poor, the nations are economically backward, the military and clerical classes still dominate, and intelligent and interested governments have not as yet been evolved.

In Russia, though Catherine II (p. 477) and her successors made earnest efforts to begin a system of state education, the period following Napoleon was one of extreme repressive reaction.

[1] In Spain, for example, the percentage of illiteracy in 1860 was 75.52; in 1870 70.01 per cent; in 1887, 68.01 per cent; in 1890, 63.78 per cent; and in 1910, 59.35 per cent. The percentage for 1920 will probably not be less than for 1910, due to the closing of many schools for lack of teachers during the World War. In 1916 ten provinces had an illiteracy of over 70 per cent, and but five had less than 40 per cent. In Madrid and Barcelona, cities as large as Baltimore and Cleveland, the illiteracy approaches a third of the population in Madrid, and a half in Barcelona.

The military class and the clergy of the Greek Church joined hands in a government interested in keeping the people submissive and devout. In consequence, at the time of the emancipation of the serfs, in 1861, it was estimated that not one per cent of the total population of Russia was then under instruction, and the ratio of illiteracy by the close of the nineteenth century was the highest in Europe outside of Spain, Portugal, and the Balkan States.

The state-control idea in the English self-governing dominions. The English and French settlers in Ontario, Quebec, and the Maritime Provinces of Canada brought the English and French parochial-school ideas from their home lands with them, but these home conceptions were materially modified, at an early date, by settlers from the northern States of the American Union. These introduced the New England idea of state control and public responsibility for education. In part copying precedents recently established in the new American States, as an outcome of the struggles there to establish free, tax-supported, and state-controlled schools, both Ontario and Quebec early began the establishment of state systems of education for their people. A superintendent of education was appointed in Ontario in 1844, and the Common School Act of 1846 laid the foundation of the state school system of the Province. In the law of 1871 a system of uniform, free, compulsory, and state-inspected schools was definitely provided for. Quebec, in 1845, made the ecclesiastical parish the unit for school administration; in 1852 appointed government inspectors for the church schools; and in 1859 provided for a Council of Public Instruction to control all schools in the Province. The Dominion Act of 1867 left education, as in the United States, to the several Provinces to control, and state systems of education, though with large liberty in religious instruction, or the incorporation of the religious schools into the state school systems, have since been erected in all the Canadian Provinces. Following American precedents, too, a thoroughly democratic educational ladder has almost everywhere been created, substantially like that shown in the Figure on page 708.

In Australia and New Zealand education has similarly been left to the different States to handle, but a state centralized control has been provided there which is more akin to French practice than to English ideas. In each State, primary education has been made free, compulsory, secular, and state-supported. The laws

making such provision in the different States date from 1872, in Victoria; 1875, in Queensland; 1878, in South Australia, West Australia, and New Zealand; and 1880, in New South Wales. Secondary education has not as yet been made free, and many excellent privately endowed or fee-supported secondary schools, after the English plan, are found in the different States.

In the new Union of South Africa all university education has been taken over by the Union, while the existing school systems of the different States are rapidly being taken over and expanded by the state governments, and transformed into constructive instruments of the States.

The state-control idea in the South American States. As we have seen in Chapter XX, the spirit of nationality awakened by the French Revolution spread to South America, and between 1815 and 1821 (p. 503) all of Spain's South American colonies revolted, declared their independence from the mother country, and set up constitutional republics. Brazil, in 1822, in a similar manner severed its connections from Portugal. The United States, through the Monroe Doctrine (1823), helped these new States to maintain their independence. For approximately half a century these States, isolated as they were and engaged in a long and difficult struggle to evolve stable forms of government, left such education as was provided to private individuals and societies and to the missionaries and teaching orders of the Roman Church. After the middle of the nineteenth century, the new forces stirring in the modern world began to be felt in South America as well, and, after about 1870, a well-defined movement to establish state school systems began to be in evidence.

The Argentine constitution of 1853 had directed the establishment of primary schools by the State, but nothing of importance was done until after the election of Dr. Sarmiento as President, in 1868. Under his influence an American-type normal school was established, teachers were imported from the United States, and liberal appropriations for education were begun. In 1873 a general system of national aid for primary education was established, and in 1884 a new law laid the basis of the present state school system. Though some earlier beginnings had been made in some of the other South American nations, Argentine is regarded as the leader in education among them. This is largely due to the democratic nature of the government which, in connec-

tion with the deep interest in education of President Sarmiento,[1] found educational expression in the creation of an American-type educational ladder, as the accompanying diagram shows. Large emphasis has been placed on scientific and practical studies in the secondary *colegios*. The normal school has been given large importance, and made a parallel and connecting link in the educational ladder between the primary schools and the universities. The Argentine school system, probably due to American influences acting through President Sarmiento, forms an exception to the usual South American state school system, as nearly all the other States have followed the French model and created a European two-class school system.



FIG. 212. THE SCHOOL SYSTEM OF THE ARGENTINE REPUBLIC

In Chili, the constitution of 1833 declared education to be of supreme importance, and a normal school was established in Santiago, as early as 1840. The basic law for the organization of a state system of primary instruction, however, dates from 1860, and the law organizing a state system of secondary and higher education from 1872.

In Peru, an educational reform movement was inaugurated in 1876, but the war with Chili (1879–84) checked all progress. In 1896 an Educational Commission was appointed to visit the United States and Europe, and the law of 1901 marked the creation of a ministry for education and the real beginnings of a state school system.

[1] While an exile from the Argentine, Dr. Sarmiento was commissioned by Chili to visit, study, and report on the state school systems of the United States and Europe. While in the United States he became intimately acquainted with Horace Mann. Later he was Minister from the Argentine to the United States, being recalled, in 1868, to assume the presidency of the Republic. He was deeply impressed with the type of educational opportunity provided in the schools of the United States and, through an appointed Minister of Education, impressed his ideas on the Argentine nation.

The Brazilian constitution of 1824 left education to the several States (twenty and one Federal District), and a permissive law of 1827 allowed the different States to establish schools. It was not until 1854, however, that public schools were organized in the Federal District, and these mark the real beginning of state education in Brazil. Since then the establishment of state schools has gradually extended to the coast States, and inland with the building of railway lines and the opening-up of the interior to outside influences. The basis for state-controlled education has now been laid in all the States, but the attendance at the schools as yet is small.[1]

In some of the other South American States, such as Bolivia, Ecuador, and Venezuela, but little progress in extending state-controlled schools has as yet been made, and the training of the young is still left largely to private effort, the Church, and the religious orders. The illiteracy in all the South American States is still high, in part due to the large native populations, and much remains to be done before education becomes general there. The state-control idea, though, has been definitely established in principle in these countries. With the establishment of stable governments, the building of railroads and steamship lines, and the development of an important international commerce — events which there have characterized the first two decades of the twentieth century — early and important progress in state educational organization and in the extension of educational advantages may be expected.

The state-school idea in eastern Asia. In 1854 Admiral Perry effected the treaty of friendship with Japan which virtually opened that nation to the influences of western civilization, and one of the most wonderful transformations of a people recorded in history soon began. In 1867 a new Mikado came to the throne, and in 1868 the small military class, which had ruled the nation for some seven hundred years, gave up their power to the new ruler. A new era in Japan, known as the *Meiji*, dates from this event. In 1871 the centuries-old feudal system was abolished, and all classes in the State were declared equal before the law. This same year the first newspaper in Japan was begun. In 1872 the first educational code for the nation was promulgated by the Mikado. This ordered the general establishment of schools, the compulsory education of the people (**R. 334 a**), and the

[1] In 1910 only about 3 per cent of the total population was in any type of school.

equality of all classes in educational matters. Students were now sent abroad, especially to Germany and the United States; foreign teachers were imported; an American normal-school teacher was placed in charge of the newly opened state normal school; the American class method of instruction was introduced; schoolbooks and teaching apparatus were prepared, after American models; middle schools were organized in the towns; higher schools were opened in the cities; and the old Academy of Foreign Languages was evolved (1877) into the University of Tokyo. In 1884 the study of English was introduced into the courses of the public schools. In 1889 a form of constitution was granted to the people, and a parliament established.[1]

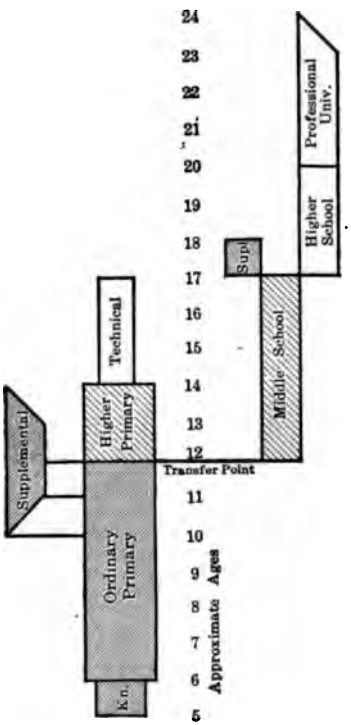


FIG. 213. THE JAPANESE TWO-CLASS SCHOOL SYSTEM

Adapting the continental European idea of a two-class school system to the peculiar needs of the nation, the Japanese have worked out, during the past half-century, a type of state-controlled school system which has been well adapted to their national needs.[2] Instruction in national morality, based on the ancestral virtues, brotherly affection, and loyalty to the constitution and the ruling class (**R. 334 b-c**), has been well worked out in their schools. Though the government has remained largely autocratic in form, the Japanese have, however, retained throughout all their educational development the fundamental democratic principle enunciated in the Preamble to the Educational Code of 1872

[1] The Mikado still retained, through his ministers, very large powers, while the parliament was a consultative assembly rather than a legislative one. The form of government has been much like that of the German Empire before the World War.

[2] The Japanese Government has so far been a military autocracy, and the Japanese have been the Prussians of the Orient. The two-class school system has accordingly met the needs of a benevolent autocracy fairly well. With the rise of a liberal party in Japan, and the beginning of some democratic life, we may look for progressive changes in their schools which will tend to produce a more democratic type of educational organization.

(R. 334 a), *viz.*, that every one without distinction of class or sex shall receive primary education at least, and that the opportunity for higher education shall be open to all children. So completely has the education of the people been conceived of as one of the most important functions of the State that all education has been placed under a centralized state control, with a Cabinet Minister in charge of all administrative matters connected with the education of the nation.

Since near the end of the nineteenth century what promises to be an even more wonderful transformation of a people—political, social, scientific, and industrial—has been taking place in China (R. 335). A much more democratic type of national school system than that of the Japanese has been worked out, and this the new (1912) Republic of China is rapidly extending in the provinces, and making education a very important function of the new democratic national life.[1] In the beginning, when displacing the centuries-old Confucian educational system,[2] the Chinese adopted Japanese ideas and organized their schools (1905) somewhat after the Japanese model. Later on, responding to the influence of many American-educated Chinese and to the more

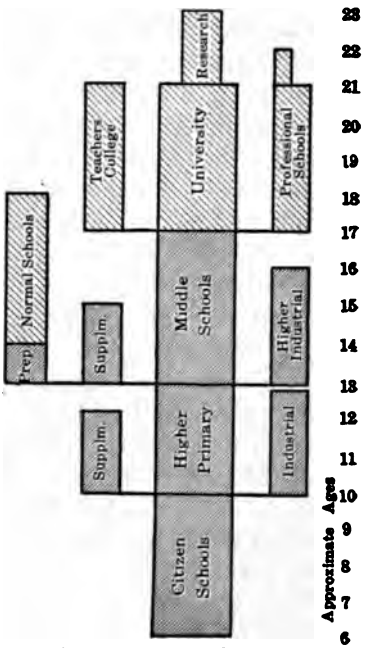


FIG. 214. THE CHINESE EDUCATIONAL LADDER

[1] "The idea of education for all classes, the aim of all educators and statesmen of western countries, scarcely entered the minds of the leaders of China under the traditional system of education. With the introduction of the new educational system, however, the problem of universal education suddenly came into prominence. Indeed, it is the stated goal of the new educational policy." (Ping Wen Kuo, *The Chinese System of Public Education*, p. 149.)

[2] Education in China has been common, for a class, for over four thousand years. The schools were private, but a detailed national system of examinations was provided by the State, and all who expected any state preferment were required to pass these state examinations. The system was based on the old Confucian classics. Under it schools existed in all the chief towns, and the examination system exerted a strong unifying influence on the nation. In 1842 China opened five treaty ports to the ships and commerce of western nations, and from 1842 to 1903 a process of gradual transition from the ancient examination system to modern conditions took place.

democratic impulses of the Chinese people, the new government established by the Republic of 1912 changed the school system at first established so as to make it in type more like the American educational ladder. The new Chinese school system is shown in the drawing on page 721. The university instruction is modern and excellent, and the addition of the cultural and scientific knowledge worked out in western Europe to the intellectual qualities of this capable people can hardly fail to result, in time, in the production of a wonderful modern nation,[1] probably in one of the greatest nations of the mid-twentieth century.

In 1891 the independent Kingdom of Siam,[2] awakened from its age-long isolation by new world influences, sent a prince to Europe to study and report on the state systems of education maintained there. As a result of his report a department of public education was created, which later evolved into a ministry of public instruction, and elementary schools were opened by the State in the thirteen thousand old Buddhist temples. These schools offered a two-year course in Siamese, followed by a five-year course in English, given by imported English teachers. Schools for girls were provided, as well as for boys. Since this beginning, higher schools of law, medicine, agriculture, engineering, and military science have been added, taught largely by imported English and American teachers. In consequence of the new educational organization, and the new influences brought in, the whole life of this little kingdom has been transformed during the past three decades.

General acceptance of the state-function conception. The different national school systems, the creation of which has so far been briefly described, are typical and represent a great world movement which characterized the latter half of the nineteenth

[1] "A nation that has preserved its identity by peaceful means for three milleniums; that has made the soil produce subsistence for a multitudinous population during that long period, while Western peoples have worn out their soil in less than that many centuries; that has produced many of the most influential of modern inventions, such as printing, gunpowder, and the compass; that has developed such mechanical ingenuity and commercial ability as are shown in its everyday life, undoubtedly possesses the ability to accomplish results by the use of methods worked out by the Western world. When modern scientific knowledge is added by the Chinese to the skill which they already have in agriculture, in commerce, in industry, in government, and in military affairs, results will be achieved, on the basis of their physical stamina and moral qualities, which will remove the ignorance, the indifference, and the prejudice of the Western world regarding things Chinese." (Monroe, Paul, Editorial introduction to Ping Wen Kuo's *The Chinese System of Public Education*.)

[2] Though appearing small on the map, Siam is a nation of six millions of people and an area over three and a half times that of the six New England States

century. This movement is still under way, and increasing in strength. Other state school organizations might be added to the list, but those so far given are sufficient. Beginning with the nations which were earliest to the front of the onward march of civilization, the movement for the state control of education, itself an expression of new world forces and new national needs, has in a century spread to every continent on the globe. To-day progressive nations everywhere conceive of education for their people as so closely associated with their social, political, and industrial progress, and their national welfare and prosperity (**R. 336**), that the control of education has come to be regarded as an indispensable function of the State. State constitutions (**R. 333**) have accordingly required the creation of comprehensive state school systems; legislators have turned to education with a new interest; bulky state school codes have given force to constitutional mandates; national literacy has become a goal; the diffusion of political intelligence by means of the school has naturally followed the extension of the suffrage; while the many new forces and impulses of a modern world have served to make the old religious type of education utterly inadequate, and to call for national action to a degree never conceived of in the days when religious, private, and voluntary educational effort sufficed to meet the needs of the few who felt the call to learn. What a few of the more important of these new nineteenth-century forces have been, which have so fundamentally modified the character and direction of education, it may be worth while to set forth briefly, before proceeding further.

II. NEW MODIFYING FORCES

The advance of scientific knowledge. The first and most important of these nineteenth-century forces, and the one which preceded and conditioned all the others, was the great increase of accurate knowledge as to the forces and laws of the physical world, arising from the application of scientific method to the investigation of the phenomena of the material world (**R. 337**). During the nineteenth century the intellect of man was stimulated to activity as it had not been before since the days when little Athens was the intellectual center of the world. What the Revival of Learning was to the classical scholars of the fifteenth and sixteenth centuries, the movement for scientific knowledge and its application to human affairs was to the nineteenth. It changed

the outlook of man on the problems of life, vastly enlarged the intellectual horizon, and gave a new trend to education and to scholarly effort. What the scholars of the seventeenth and eighteenth centuries had been slowly gathering together as interesting and classified phenomena, the scientific scholars of the nineteenth century organized, interpreted, expanded, and applied. Since the day of Copernicus (p. 386) and Newton (p. 388) a growing appreciation of the permanence and scope of natural law in the universe had been slowly developing, and this the scholars of the nineteenth century fixed as a principle and applied in many new directions. A few of the more important of these new directions may profitably be indicated here.

In the domain of the physical sciences very important advances characterized the century. Chemistry, up to the end of the first quarter of the nineteenth century largely a collection of unrelated facts, was transformed by the labors of such men as Dalton (1766–1844), Faraday (1791–1867), and Liebig into a wonderfully well-organized and vastly important science. Liebig carried chemistry over into the study of the processes of digestion and the functioning of the internal organs, and reshaped much of the instruction in medicine. Liebig is also important as having opened, at Giessen, in 1826, the first laboratory instruction in chemistry for students provided in any university in the world. By many subsequent workers chemistry has been so applied to the arts that it is not too much to say that a knowledge of chemistry underlies the whole manufacturing and industrial life of the present, and that the degree of industrial preëminence held by a nation to-day is largely determined by its mastery of chemical processes.



FIG. 215. BARON JUSTUS VON LIEBIG (1803–73)

Physics has experienced an equally important development. It, too, at the beginning of the nineteenth century was in the preliminary state of collecting, coördinating, and trying to interpret data. In a century physics has, by experimentation and the application of mathematics to its problems, been organized into a number of exceedingly important sciences. In dynamics, heat, light, and particularly in electricity, discoveries and extension of

previous knowledge of the most far-reaching significance have been made. What at the beginning of the nineteenth century was a small textbook study of natural philosophy has since been subdivided into the two great sciences of physics and chemistry, and these in turn into numerous well-organized branches. Today these are taught, not from textbooks, but in large and costly laboratories, while manufacturing establishments and governments now find it both necessary and profitable to maintain large scientific institutions for chemical and physical research.

The great triumph of physics, from the point of view of the reign of law in the world of matter, was the experimental establishment (1849) of the fundamental principle of the conservation of energy. This ranks in importance in the world of the physical sciences with the theory of evolution in the biological. The perfection of the spectroscope (1859) revealed the rule of chemical law among the stars, and clinched the theory of evolution as applied to the celestial universe. The atomic theory of matter [1] was an extension of natural laws in another direction. In 1846 occurred the most spectacular proof of the reign of natural law which the nineteenth century witnessed. Two scientists, in different lands,[2] working independently, calculated the orbit of a new planet, Neptune, and when the telescope was turned to the point in the heavens indicated by their calculations the planet was there. It was a tremendous triumph for both mathematics and astronomy. Such work as this meant the firm establishment of scientific accuracy, and the ultimate elimination of the old theories of witchcraft, diabolic action, and superstition as controlling forces in the world of human affairs.

The publication by Charles Lyell (1797–1875) of his *Principles of Geology*, in 1830, marked another important advance in the knowledge of the operations of natural law in the physical world, and likewise a revolution in thinking in regard to the age and past history of the earth. Few books have ever more deeply influenced human thinking. The old theological conception of earthly

[1] "Through metaphysics first; then through alchemy and chemistry, through physical and astronomical spectroscopy, lastly through radio-activity, science has slowly groped its way to the atom." (Soddy, F., *Matter and Energy.*)

[2] Adams in England, and Leverrier in France. The planet Uranus had for long been known to be erratic in its movements, and Adams and Leverrier concluded, working from Newton's law for gravitation, that it must be due to the pull of an unknown planet. Both calculated the orbit of this unknown body, Adams sending his calculations to the Royal Observatory at Greenwich, and Leverrier to the observatory at Berlin. At both observatories the new planet — later named Neptune — was picked up by the telescope at the position indicated.

"catastrophes" [1] was overthrown, and in its place was substituted the idea of a very long and a very orderly evolution of the planet. Geology was created as a new science, and out of this has come, by subsequent evolution, a number of other new sciences [2] which have contributed much to human progress.



FIG. 216.
CHARLES DARWIN
(1809–82)

Another of the great books of all time appeared in 1859, when Charles Darwin (1809–1882) published the results of thirty years of careful biological research in his *Origin of Species*. This swept away the old theory of special and individual creation which had been cherished since early antiquity, and substituted in its place the reign of law in the field of biological life. This substitution of the principle of orderly evolution for the old theory of special creation marked another forward step in human thinking,[3] and gave an entirely new direction to the old study of natural history.[4] In the hands of such workers as Wallace (1823–1913), Asa Gray (1810–88), Huxley (1825–94), and Spencer (1820–1903) it now proved a fruitful field.

In 1856 the German Virchow (1821–1902) made his far-reaching contribution of cellular pathology to medical science; between 1859 and 1865 the French scientist Pasteur (1822–95) established the germ theory of fermentation, putrefaction, and disease; about the same time the English surgeon Lister (1827–1914) began to use antiseptics in surgery; and, in 1879, the bacillus of typhoid

[1] This theory of "catastrophes" held that at a number of successive epochs, of which the age of Noah was the latest, great revolutions or disasters had taken place on the earth's surface, in which all living things were destroyed. Later the world was restocked, and again destroyed. This explained the successive strata, and the fossils they contained. For this theory Lyell substituted a slow and orderly evolution, covering ages, and completely upset the Mosaic chronology.

[2] For example: — mineralogy, petrography, petrology, crystallography, stratigraphy, and paleontology.

[3] "Darwin's *Origin of Species* had come into the theological world like a plow into an ant-hill. Everywhere those thus rudely awakened from their old comfort and repose had swarmed forth angry and confused. Reviews, sermons, books, light and heavy, came flying at the new thinker from all sides." (White, A. D., *The Warfare of Science and Theology*, vol. I, p. 70.)

[4] Natural history as a study goes back to the days of Aristotle, in Greece, but it had always been a study of fixed forms. Darwin destroyed this conception, and vitalized the new subject of biology. From this botany and zoölogy have been derived, and from these again many other new sciences, such as physiology, morphology, bacteriology, anthropology, cytology, entomology, and all the different agricultural sciences.

fever was found. Out of this work the modern sciences of pathology, aseptic surgery, bacteriology, and immunity were created, and the cause and mode of transmission of the great diseases [1] which once decimated armies and cities — plague, cholera, malaria, typhoid, typhus, yellow fever, dysentery — as well as the scourges of tuberculosis, diphtheria, and lockjaw, have been determined. The importance of these discoveries for the future welfare and happiness of mankind can scarcely be overestimated. Sanitary science arose as an application of these discoveries, and since about 1875 a sanitary and hygienic revolution has taken place.



FIG. 217. LOUIS PASTEUR (1822–95)

The above represent but a few of the more important of the many great scientific advances of the nineteenth century. What the thinkers of the eighteenth century had sowed broadcast through a general interest in science, their successors in the nineteenth reaped as an abundant harvest. The three great master keys of science — the higher mathematics, the principle of the conservation of energy, and the principle of orderly evolution of life according to law — so long unknown to man, had at last been discovered, and, with these in their possession, men have since opened up many of the long-hidden secrets of cause and growth and form and function, both in the heavens and on the earth, and have revealed to a wondering world the prodigious and eternal forces of an orderly universe. The fruitfulness of the Baconian method (p. 390) in the hands of his successors has far surpassed his most sanguine expectations.

The applications of science and the result. All this work, as has been frequently pointed out (**R. 338**), had of necessity to precede the applications of science to the arts and to the advancement of the comforts and happiness of mankind. The new studies soon caught the attention of younger scholars; special schools for their study began to be established by the middle of the nineteenth century; [2] enthusiastic students of science began forcefully to challenge the centuries-long supremacy of classical studies;

[1] The bacillus of tuberculosis was isolated in 1882. Asiatic cholera in 1883, lockjaw and diphtheria in 1884, and bubonic plague in 1894.

[2] Schools of engineering, mining, agriculture, and applied science are types.

funds for scientific research began to be provided; the printing-press disseminated the new ideas; and thousands of applications of science to trade and industry and human welfare began to attract public attention and create a new demand for schools and for a new extension of learning. During the past century the applications of this new learning to matters that intimately touch the life of man have been so numerous and so far-reaching in their effects that they have produced a revolution in life conditions unlike anything the world ever experienced before. In all the days from the time of the Crusades to the end of the Napoleonic Wars the changes in living effected were less, both in scope and importance, than have taken place in the century since Napoleon was sent to Saint Helena.

This transformation we call the Industrial Revolution. This, as we pointed out earlier (p. 492), began in England in the late eighteenth century. France did not experience its beginnings until after the Napoleonic Wars, though after about 1820 the transformations there were rapid and far-reaching. In the United States it began about 1810–15, and between 1820 and 1860 the industrial methods of the people of the northeastern quarter of the United States were revolutionized. Between 1860 and 1900 they were revolutionized again. In the German States the transformation began about 1840, though it did not reach its great development until after the establishment of the Empire, in 1871. Since the middle of the nineteenth century, with the development of factories, the building of railroads, and the extension of steamship lines, even the most remote countries have been affected by the new forces. Nations long primitive and secluded have been modernized and industrialized; century-old trades and skills have been destroyed by machinery; the old home and village industries have been replaced by the factory system; cities for manufacturing and trade have everywhere experienced a rapid development; and even on the farm the agricultural methods of bygone days have been replaced by the discoveries of science and the products of invention. Almost nothing is done to-day as it was a century ago, and only in remote places do people live as they used to live. The nature and extent of the change which has been wrought, and some estimate as to its effect upon educational procedure, may perhaps be better comprehended if we first contrast living conditions before and after this industrial transformation.

Living conditions a century ago. A century ago people everywhere lived comparatively simple lives. The steam engine, while beginning to be put to use (p. 493), had not as yet been extensively applied and made the willing and obedient slave of man. The lightning had not as yet been harnessed, and the now omnipresent electric motor was then still unknown. Only in England had manufacturing reached any large proportions, and even there the methods were somewhat primitive. Thousands of processes which we now perform simply and effectively by the use of steam or electric power, a century ago were done slowly and painfully by human labor. The chief sources of power were then man and horse power. The home was a center in which most of the arts and trades were practiced, and in the long winter evenings the old crafts and skills were turned to commercial account. What every family used and wore was largely made in the home, the village, or the neighborhood.

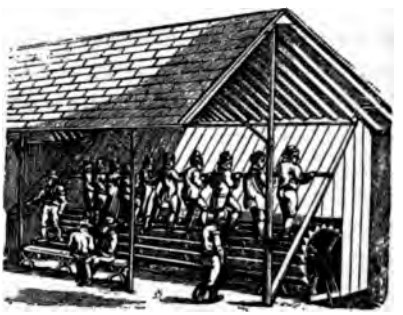


FIG. 218. MAN POWER BEFORE THE DAYS OF STEAM

Foot power a century ago. (From a cut by Anderson, America's first important engraver)

Travel was slow and expensive and something only the well-to-do could afford. To go fifty miles a day by stage-coach, or one hundred by sailing packet on the water, was extraordinarily rapid. "One could not travel faster by sea or by land," as Huxley remarked, "than at any previous time in the world's history, and King George could send a message from London to York no faster than King John might have done." The steam train was not developed until about 1825, and through railway lines not for a quarter-century longer. It took four days by coach from London to York (188 miles); six weeks by sailing vessel from Southampton to Boston; and six months from England to India. People moved about but little. A journey of fifty miles was an event — for many something not experienced in a lifetime. To travel to a foreign land made a man a marked individual. Benjamin Franklin tells us that he was frequently pointed out on the streets of Philadelphia, then the largest city in the United States, as a man who had been to Europe. George Tick-

nor has left us an interesting record (R. 339) of his difficulties, in finding anything in print in the libraries of the time, about 1815, or any one who could tell him about the work of the German universities, which he, as a result of reading Madame de Staël's book on Germany, was desirous of attending.[1]

Everywhere it was a time of hard work and simple living. Every youngster had to become useful at an early age. The work of life, in town or on the farm, required hard and continual labor from all. Farm machinery had not been perfected, and



FIG. 219. THRESHING WHEAT A CENTURY AGO
(After a woodcut by Jacque, in *L'Illustration*)

hand labor performed all the operations of ploughing and sowing, reaping and harvesting. With the introduction of the factory system, men, women, and children were used to operate machinery, children being apprenticed to the mills at about eight years of age and working ten to twelve hours a day. This soon worked the life out of human beings, and in consequence sickness, wretchedness, juvenile delinquency, ignorance, drunkenness, pauperism, and crime increased greatly as cities grew and the factory system drew thousands from the farms to the towns. When Queen Victoria came to the throne (1837) one person in twelve in England was a pauper, and the lot of the poor was wretched in the extreme. In cities they lived in cellars and basements and hovels. There was practically no sanitation or drainage. Streets

[1] The book on Germany (*De l'Allemagne*) by Madame de Staël (1766–1817), a brilliant French novelist, was published and immediately confiscated in France in 1811, and republished in England in 1813. It is one of the most remarkable books on one country written by a native of another which had appeared up to that time. Through reading it many English and Americans discovered a new world.

and alleys were filthy. Graveyards were commonly located in the heart of a town. A pure water-supply through water-mains was unknown. Pumps and water-carriers supplied nearly all the needs. There was in consequence much sickness, and such diseases as typhoid and malaria ran rampant.



FIG. 220. A CITY WATER-SUPPLY ABOUT 1830
(After a lithograph by Bellangé)

Change in living conditions to-day. In a century all has been changed. Steam and electricity and sanitary science have transformed the world; the railway, steamship, telegraph, cable, and printing-press have made the world one. The output of the factory system has transformed living and labor conditions, even to the remote corners of the world; sanitary science and sanitary legislation have changed the primitive conditions of the home and made of it a clean and comfortable modern abode; men and women have been freed from an almost incalculable amount of drudgery and toil, and the human effort and time saved may now be devoted to other types of work or to enjoyment and learning. Thousands who once were needed for menial toil on farm or in shop and home are now freed for employment in satisfying new wants and new pleasures that mankind has come to know,[1] or may devote their time and energies to forms of service that advance the welfare of mankind or minister to the needs of the human spirit.

Labor-saving devices and the applications of scientific work have touched all phases of life and labor of men and women, and

[1] For example, it has been estimated that one fifteenth of the working population of modern industrial nations devotes itself to transportation; another one fifteenth to maintaining public services — light, gas, telephone, water, sewage, streets, parks — unknown in earlier times; and another one fifteenth to the manufacture and distribution and care of automobiles. Add still further the numbers employed in connection with theaters, moving-picture shows, phonographs, magazines and the newspapers, soft-drink places, millinery and dry goods, hospitals, and similar "appendages of civilization," and we get some idea of the increased labor efficiency which the applications of science have brought about.

under modern methods of transportation go everywhere. The American self-binding reaper is found in the grain-fields of Russia and the Argentine; one may buy cans of kerosene and tinned meats and vegetables almost anywhere in the world to-day; sewing machines and phonographs add to the comfort and pleasure of the African native and the dweller on the Yukon; "milady" in Siam uses cosmetics manufactured for the devotees of fashion in Paris; the Sultan of Sulu wears an elegant American wrist-watch; the Dahomeny tribesman has a safety razor, and a mirror of French plate; the Persian dandy wears shoes and haberdashery made in the United States; old Chinamen up the Yellow River Valley read their Confucius by the light of an Edison Mazda; the steam train wends its way up from Jaffa to Jerusalem; the gasoline power boat chugs its course up the Nile the Pharaohs sailed; and modern surgical methods and instruments are used in the hospitals of Manila and Singapore, Cairo and Cape Town. A rupee spent for thread at Calcutta starts the spindles going in Manchester; a new calico dress for a Mandalay belle helps the cotton-print mills of Leeds; a new carving set for a Fiji Islander means more labor for some cutlery works in Sheffield; a half-dollar for a new undershirt in Panama means increased work for a cotton mill in New England; a new blanket called for against the winter's cold of Siberia moves the looms of some Rhode Island town; a dime spent for a box of matches in Alaska means added labor and profit for a match factory in California; a new bath tub in Paraguay spells increased output for a factory at Milan or Turin; and the Christmas wishes of the children in Brazil give work to the toy factories of Nüremberg.

Trains and huge steamers move to-day along the great trade routes of the modern world, exchanging both the people and their products. The holds of the ships are filled with coal and grain and manufactured implements and commodities of every description, while their steerage space is crowded with modern Marco Polos and Magellans going forth to see the world. The Hindoo walks the streets of Cape Town, London, Sydney, New York, San Francisco, and Valparaiso; the Russian Jew is found in all the Old and New World cities; the Englishman and the American travel everywhere; the Japanese are fringing the Pacific with their laboring classes; toiling Italians and Greeks are found all over the world; peasants from the Balkans gather the prune and orange crops of California; the moujic from the Russian Cau-

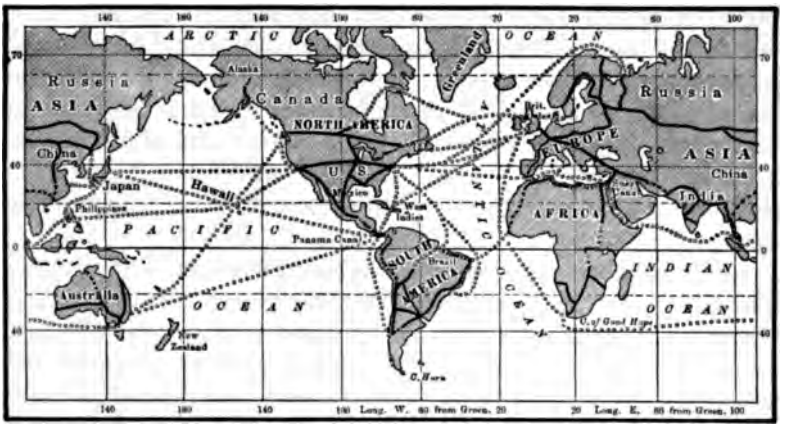


FIG. 221. THE GREAT TRADE ROUTES OF THE MODERN WORLD

Broken lines, on land, indicate gaps soon to be closed. Compare this with the maps on pages 161 and 258, and note the progress in discovery and intercommunication. Ships and trains are constantly passing over these routes, bearing both freight and peoples.

casus tills the wheat-fields of the Dakotas; while the Irish, Scandinavians, and Teutons form the political, farming, and commercial classes in many far-distant lands. In the recent World War Serbs from Montana and Colorado fought side by side with Serbs from Belgrade and Nisch; Greeks from New York and San Francisco helped their brothers from Athens drive the Bulgars back up the Vardar Valley; Italians from New Orleans and Rio de Janeiro helped their kinsmen from the valley of the Po hold back the Hun from the Venetian plain; Chinese from the valleys of the Tong-long and the Yang-tse-Kiang backed up the Allied armies by tilling the fields of France; and Algerian and Senegalese natives helped the French hold back the Teutonic hordes from the ravishment of Paris. So completely has the old isolation been broken down! So completely is the world in flux! So small has the world become!

It was almost a century from the time instruction in Greek was revived in Florence (1396) until Linacre first lectured on Greek at Oxford (c. 1492); six months after the X-ray was perfected in Germany it was in use in the hospitals of San Francisco. In the Middle Ages thousands might have died of starvation in Persia or Egypt, a famous city in Asia Minor might have been destroyed by an earthquake and many people killed, or war might have raged for years in the Orient without a citizen of western Europe know-

ing of it all his life. To-day any important event anywhere within the range of the telegraph or the cable would be reported in to-morrow morning's paper, and carefully described and illustrated in the magazines at an early date. Man is no longer a citizen of a town or a state, but of a nation and of the world. How intelligently he can use this larger citizenship depends to-day largely upon the character and the extent of the education he has received.

Effect of these changes on the laboring-classes. At first the effect of the introduction of factory-made goods and labor-saving devices was to upset the old established institutions. Trades practiced by the guilds since the Middle Ages were destroyed, because factories could turn out goods faster and cheaper than guild workmen could make them. The age-old apprenticeship system began to break down. Everywhere people were thrown out of employment, and a vast shifting of occupations took place. There was much discontent, and laborers began to unite, where allowed to do so,[1] with a view to improving their economic and political condition by concerted action. The political revolutions of 1848 throughout Europe were in part a manifestation of this discontent, and the right to organize was everywhere demanded and in time generally obtained. Among the planks in their platform were equality of all before the law; the limitation of child and woman labor; better working conditions and wages; the provision of schools for their children at public expense; and the extension of the right of suffrage.



FIG. 222. AN EXAMPLE OF THE SHIFTING OF OCCUPATIONS
Sawing boards by hand, before the introduction of steam power.

[1] Labor unions were legalized in England in 1825. In the United States they arose about 1825–30, and for a time played an important part in securing legislation to better the condition of the workingman and to secure education for his children. In continental Europe, the reactionary governments following the downfall of Napoleon forbade assemblies of workingmen or their organization, as dangerous to government. In consequence, labor organizations in France were not permitted until 1848, and in Germany and Austria not until after the middle of the century. In Japan, as late as 1919, laborers were denied the right to organize.

Despite certain unfortunate results following the change from age-old working conditions, the century of transition has seen the laboring man making gains unknown before in history, and the peasant has seen the abolition of serfdom [1] and feudal dues. Homes have gained tremendously. The drudgery and wasteful toil have been greatly mitigated. To-day there is a standard of comfort and sanitation, even for those in the humblest circumstances, beyond all previous conceptions. The poorest workman to-day can enjoy in his home lighting undreamed of in the days of tallow candles; warmth beyond the power of the old smoky soft-coal grate; food of a variety and quality his ancestors never knew; kitchen conveniences and an ease in kitchen work wholly unknown until recently; and sanitary conveniences and conditions beyond the reach of the wealthiest half a century ago. The caste system in industry has been broken down, and men and their children may now choose their occupations freely,[2] and move about at will. Wages have greatly increased, both actually and relatively to the greatly improved standard of living. The work of women and children is easier, and all work for shorter hours. Child labor is fast being eliminated in all progressive nations. In consequence of all these changes for the better, people to-day have a leisure for reading and thinking and personal enjoyment entirely unknown before the middle of the nineteenth century, and governments everywhere have found it both desirable and necessary to provide means for the utilization of this leisure and the gratification of the new desires. Along with these changes has gone the development of the greatest single agent for spreading liberalizing ideas — the modern newspaper — "the most inveterate enemy of absolutism and reaction." Despite censorships, suppressions, and confiscations, the press has by now established its freedom in all enlightened lands, and the cylinder press, the telegraph, and the cable have become "indispensable adjuncts to

[1] Up to 1789 serfdom was the rule on the continent of Europe; by 1850 there was practically no serfdom in central and western Europe, and in 1866 serfdom was abolished in Russia. For the worker and farmer the years between 1789 and 1848 were years of rapid progress in the evolution from mediæval to modern conditions of living.

[2] Under conditions existing up to the close of the eighteenth century, in part persisting up to the middle of the nineteenth on the continent, and still found in unprogressive lands, a close limitation of the rights of labor was maintained. Children followed the trade of their fathers, and the right of an apprentice later to open a shop and better his condition was prohibited until after he had become an accepted master (p. 210) in his craft. Guild members, too, were not permitted to branch out into any other line of activity, or to introduce any new methods of work. All these old limitations the Industrial Revolution swept away.

the development of that power which every absolutist has come to dread, and with which every prime minister must daily reckon."

III. EFFECT OF THESE CHANGES ON EDUCATION

General result of these changes. The general result of the vast and far-reaching changes which we have just described is that the intellectual and political horizon of the working classes has been tremendously broadened; the home has been completely altered; children now have much leisure and do little labor; and the common man at last is rapidly coming into his own. Still more, the common man seems destined to be the dominant force in government in the future. To this end he and his children must be educated, his wife and children cared for, his home protected, and governments must do for him the things which satisfy his needs and advance his welfare. The days of the rule of a small intellectual class and of government in the interests of such a class have largely passed, and the political equality which the Athenian Greeks first in the western world gave to the "citizens" of little Athens, the Industrial Revolution has forced modern and enlightened governments to give to all their people. In consequence, real democracy in government, education, justice, and social welfare is now in process of being attained generally, for the first time in the history of the world.

The effect of all these changes in the mode of living of peoples is written large on the national life. The political and industrial revolutions which have marked the ushering-in of the modern age have been far-reaching in their consequences. The old home life and home industries of an earlier period are passing, or have passed, never to return. Peoples in all advanced nations are rapidly swinging into the stream of a new and vastly more complex world civilization, which brings them into contact and competition with the best brains of all mankind. At the same time a great and ever-increasing specialization of human effort is taking place on all sides, and with new and ever more difficult social, political, educational, industrial, commercial, and human-life problems constantly presenting themselves for solution. The world has become both larger and smaller than it used to be, and even its remote parts are now being linked up, to a degree that a century ago would not have been deemed possible, with the future welfare of the nations which so long bore the brunt of the struggle for the preservation and advancement of civilization.

These changes and the school. It is these vast and far-reaching political, industrial, and social changes which have been the great actuating forces behind the evolution and expansion of the state school systems which we have so far described. The American and French political revolutions, with their new philosophy of political equality and state control of education, clearly inaugurated the movement for taking over the school from the Church and the making of it an important instrument of the State. The extension of the suffrage to new classes gave a clear political motive for the school, and to train young people to read and write and know the constitutional bases of liberty became a political necessity. The industrial revolution which followed, bringing in its train such extensive changes in labor and in the conditions surrounding home and child life, has since completely altered the face of the earlier educational problem. What was simple once has since become complex, and the complexity has increased with time. Once the ability to read and write and cipher distinguished the educated man from the uneducated; to-day the man or woman who knows only these simple arts is an uneducated person, hardly fit to cope with the struggle for existence in a modern world, and certainly not fitted to participate in the complex political and industrial life of which, in all advanced nations, he or she[1] to-day forms a part.

It is the attempt to remould the school and to make of it a more potent instrument of the State for promoting national consciousness (**R.** 340) and political, social, and industrial welfare that has been behind the many changes and expansions and extensions of education which have marked the past half-century in all the leading world nations, and which underlie the most pressing problems in educational readjustment to-day. These changes and expansions and problems we shall consider more in detail in the chapters which follow. Suffice it here to say that from mere teaching institutions, engaged in imparting a little religious instruction and some knowledge of the tools of learning, the school, in all the leading nations, has to-day been transformed into an institution for advancing national welfare. The leading purpose now is to train for political and social efficiency in the

[1] Women in Europe have secured the ballot rapidly since the end of the nineteenth century. With manhood suffrage secured, universal suffrage is the next step. Women were given the right to vote and hold office in Finland in 1906; in Norway in 1907; in Denmark in 1916; in England in 1918; in Germany in 1919; and in the United States in 1920.

more democratic types of governments being instituted among peoples, and to impart to the young those industrial and social experiences once taught in the home, the trades, and on the farm, but which the coming of the factory system and city life have deprived them otherwise of knowing.

New problems to be met by education. As participation in the political life of nations has been extended to larger and larger groups of the people, and as the problems of government have become more and more complex, the schools have found it necessary to add instruction in geography, history, government, and national ideals and culture to the earlier instruction. In the less democratic nations which have evolved national school systems, this new instruction has often been utilized to give strength to the type of government and social conditions which the ruling class desired to have perpetuated. This has been the evident purpose in Japan (**R.** 334), though the government of Imperial Germany formed perhaps the best illustration of such perversion. This was seen and pointed out long ago by Horace Mann (**R.** 281). There the idea of nationality through education (**R.** 342) was carried to such an extreme as made the government oppressive to subject peoples and a menace to neighboring States.[1] On the other hand, the French have used their schools for national ends (**R.** 341) in a manner that has been highly commendable.

As the social life of nations has become broader and more complex, a longer period of guidance has become necessary to prepare the future citizens of the State for intelligent participation in it. As a result, child life everywhere has and is still experiencing a new lengthening of the period of dependence and training, and all national interests now indicate that the period devoted to preparing for life's work will need to be further lengthened. All recent thinking and legislation, as well as the interests of organized labor and the public welfare, have in recent decades set strongly against child labor. Economically unprofitable under modern industrial conditions, and morally indefensible, it has at last come to be accepted as a principle, by progressive nations, that it is better for children and for society that they remain under some form of instruction until they are at least sixteen years of age. To this end the common primary school has been continued upward, part-time continuation schools of various types have been organized

[1] See an excellent brief article "On German Education," by E. C. Moore, in *School and Society*, vol. 1, pp. 886–89.

for those who must go to labor earlier, and people's high schools or middle schools have been added (see Figure 210, p. 713) to give the equivalent of a high-school education to the children of the classes not patronizing the exclusive and limited tuition secondary school.

As large numbers of immigrants from distant lands have entered some of the leading nations, notably England and the United States, and particularly immigrants from less advanced nations where general education is not as yet common, and where far different political, social, judicial, and hygienic conditions prevail, a new duty has been thrust upon the school of giving to such incoming peoples, and their children, some conception of the meaning and method and purpose of the national life of the people they have come among. The national schools have accordingly been compelled to give attention to the needs of these new elements in the population, and to direct their attention less exclusively to satisfying the needs of the well-to-do classes of society. Educational systems have in consequence tended more and more to become democratic in character, and to serve in part as instruments for the assimilation of the stranger within the nation's gates and for the perpetuation and improvement of the national life.

Education a constructive national tool. One result of the many political, social, and industrial changes of a century has been to evolve education into the great constructive tool of modern political society. For ages a church and private affair, and of no great importance for more than a few, it has to-day become the prime essential to good government and national progress, and is so recognized by the leading nations of the world. As people are freed from autocratic rule and take upon themselves the functions of government, and as they break loose from their age-old political, social, and industrial moorings and swing out into the current of the stream of modern world-civilization, the need for the education of the masses to enable them to steer safely their ship of state, and take their places among the stable governments of a modern world, becomes painfully evident. In the hands of an uneducated people a democratic form of government is a dangerous instrument, while the proper development of natural resources and the utilization of trade opportunities by backward peoples, without being exploited, is almost impossible. In Russia, Mexico, and the Central American "republics" we see the results of a

democracy in the hands of an uneducated people. There, too often, the revolver instead of the ballot box is used to settle public issues, and instead of orderly government under law we find injustice and anarchy. A general system of education that will teach the fundamental principles of constitutional liberty, and apply science to production in agriculture and manufacturing, is almost the only solution for such conditions. By contrast with the surrounding "republics" one finds in Guatemala[1] a country that has used education intelligently as a tool to advance the interests of its people.

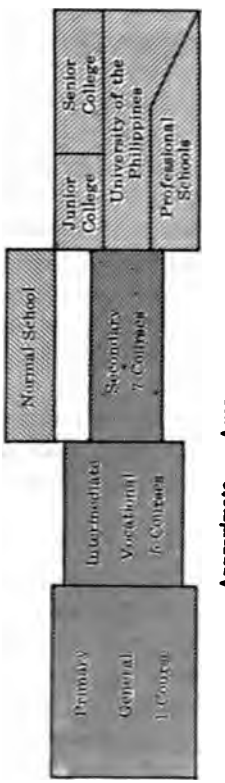


FIG. 223.
THE PHILIPPINE SCHOOL SYSTEM

A teacher-training course is given as one of the vocational courses in the Intermediate School, and the Normal School at Manila represents one of the secondary school courses. The University, besides the combined four-year college course, has professional courses of three to five years in

When the United States freed Cuba, Porto Rico, and the Philippines from Spanish rule, a general system of public education, modeled after the American educational ladder, was created as a safeguard to the liberty just brought to these islands, and to education the United States added courts of justice and bureaus of sanitation as important auxiliary agencies. As a result the peoples of these islands have made a degree of progress in self-government and industry in three decades not made in three centu-

[1] A State approximately the size of Illinois, and containing a population of about two million people. The great development of this country is in reality a history of the work of President Manuel Estrada Cabrera, who was president from 1898 to 1920. His ruling interest has been public education, believing that in universal education rests the future greatness of the State. He accordingly labored to establish schools, and to bring them up to as high a level as possible. The government has spent much in building modern-type schoolhouses and in subsidizing schools, holding that with the proper training of the younger generation the future position of the nation rests. A sincere admirer of the United States, American models have been copied. When the United States entered the World War, Guatemala was the first Central American republic to follow. During the War President Cabrera "would allow nothing to interfere with the advancement of free and compulsory education in the State." (See Domville-Fife, C. W., *Guatemala and the States of Central*

ries under Spanish rule. The good results of the work done in these islands in establishing schools, building roads and bridges, introducing police courts, establishing good sanitary conditions, building hospitals and training nurses, applying science to agriculture, developing tropical medicine, and training the people in the difficult art of self-government, will for long be a monument to the political foresight and intelligent conceptions of government held by the American people. In a similar way the French have opened schools in Morocco, Algiers, Tunis, Senegal, Madagascar, and French Indo-China, as have the English in Egypt, India, Hong Kong,[1] the West Indies, and elsewhere. With the freeing of Palestine from the rule of the Turk, the English at once began the establishment of schools and a national university there, and doubtless they will do the same in time in Persia and Mesopotamia.

Germany, too, before the World War, but with less benévolent purposes than the Americans, the French, or the English, was also busily engaged in extending her influence through education. Her universities were thrown open to students from the whole world, and excellent instruction did they offer. The "Society for the Extension of Germanism in Foreign Countries" rendered an important service. Professors were "exchanged"; the introduction of instruction in the German language into the schools of other nations was promoted; and German schools were founded and encouraged abroad. Especially were *Realschulen* promoted to teach the wonders of German science, pure and applied. In southern Brazil and the Argentine, and in Roumania, Bulgaria, and Turkey, particular efforts were made to extend German influence and pave the way for German commercial and perhaps political expansion. Primary schools, girls' schools, and *Real*-schools in numbers were founded and aided abroad, and their progress reported to the colonial minister at home. All through the Near East the German was busily building, through trade

[1] "Imagine how the streams of Celestials circulating between Hong Kong and the mainland spread the knowledge of what a civilized government does for the people! At Shanghai and Tientsin, veritable fairylands for the Chinese, they cannot but contrast the throngs of rickshas, dog-carts, broughams, and motor cars that pour endlessly through the spotless asphalt streets with the narrow, crooked, filthy, noisome streets of their native city, to be traversed only on foot or in a sedan chair. Even the young mandarin, buried alive in some dingy walled town of the far interior, without news, events, or society, recalled with longing the lights, the gorgeous tea houses, and the alluring 'sing-song' girls of Foochow Road, and cursed the stupid policy of a government that penalized even enterprising Chinamen who tried to 'start something' for the benefit of the community." (Ross, E. A., *Changing America*, p. 22.)

and education, a new empire for himself. Had he been content to follow the slower paths of peaceful commercial and intellectual conquest, with his wonderful organization he would have been irresistible. With one gambler's throw he dashed his future to the ground, and unmasked himself before the world!

Expansion of the educational idea. In all lands to-day where there is an intelligent government, the education of the people through a system of state-controlled schools is regarded as of the first importance in moulding and shaping the destinies of the nation and promoting the country's welfare. Beginning with education to impart the ability to read and write and cipher, and as an aid to the political side of government, the education of the masses has been so expanded in scope during the century that to-day it includes aims, classes, types of schools, and forms of service scarcely dreamed of at the time the State began to take over the school from the Church, with a view to extending elementary educational advantages and promoting literacy and citizenship. What some of the more important of these expansions have been we shall state in a following chapter, but before doing so let us return to another phase of the problem — that of the progress of educational theory — and see what have been the main lines of this progress in the theory as to the educational purpose since the time when Pestalozzi formulated a theory for the secular school.

QUESTIONS FOR DISCUSSION

1. What does the emphasis on the People's High Schools in Denmark indicate as to the political status of the common people there?
2. Explain the educational prominence of Finland, compared with its neighbor Russia.
3. Show the close relation between the character of the school system developed in Japan and the character of its government. In China.
4. Show why the state-function conception of education is destined to be the ruling plan everywhere.
5. Show the close connection between the Industrial Revolution and a somewhat general diffusion of the fundamental principles revealed by the study of science.
6. Show how the Industrial Revolution has created entirely new problems in education, and what some of these are.
7. Show the connection between the Industrial Revolution and political enfranchisement.
8. Enumerate some of the educational problems we now face that we should not have had to deal with had the Industrial Revolution not taken place.
9. Why has the result of these changes been to extend the period of dependence and tutelage of children?
10. Outline an educational solution of the problem of Mexico. Of Russia. Of Persia.

11. Show how Germany found it profitable to establish *Realschulen* in such distant countries as Turkey, Mesopotamia, and the Argentine.
12. Describe the expansion of the educational idea since the days when Pestalozzi formulated the theory for the secular school.
13. What is the social significance of the development of parallel secondary schools and courses, in all lands?
14. Contrast the American and the European secondary school in purpose. Why should the American be a free school, while those in Europe are tuition schools?
15. Show why the essentially democratic school system maintained in the United States would not be suited to an autocratic form of government.
16. Show that the weight of a priesthood and the force of religious instruction in the schools would be strong supports for monarchical forms of government.
17. Homogeneous monarchical nations look after the training of their teachers much better than does such a cosmopolitan nation as the United States. Why?

SELECTED READINGS

In the accompanying *Book of Readings* the following illustrative selections are reproduced:

333. Switzerland: Constitutional Provisions as to Education and Religious Freedom.
334. Japan: The Basic Documents of Japanese Education.
(*a*) Preamble to the Education Code of 1872.
(*b*) Imperial Rescript on Moral Education.
(*c*) Instructions as to Lessons on Morals.
335. Ping Wen Kuo: Transformation of China by Education.
336. Mann: Education and National Prosperity.
337. Huxley: The Recent Progress of Science.
338. Anon.: Scientific Knowledge must precede Invention.
339. Ticknor: Illustrating Early Lack of Communication.
340. Monroe: The Struggle for National Realization.
341. Buisson, F.: The French Teacher and the National Spirit.
342. Fr. de Hovre: The German Emphasis on National Ends.
343. Stuntz: Landing of the Pilgrims at Manila.

QUESTIONS ON THE READINGS

1. Compare the Swiss and American Federal organizations, and state just what the Swiss Constitution (**333**) provides as to education.
2. Suppose you knew nothing about the Japanese, what type of government would you take theirs to be from reading the Imperial Rescript (**334 b**)?
3. In comparing the Chinese transformation and the Renaissance (**335**), does Mr. Ping propose comparable events?
4. Show that Mr. Mann's argument (**336**) is still sound.
5. Does Huxley overdraw (**337**) our dependence on science?
6. From **338**, show why the Middle Ages were so poor in inventions and discoveries.
7. Are there universities anywhere to-day of which we know as little as Ticknor was able to find out (**339**) a century ago?
8. Show that Monroe's statements are true that the struggle for national realization (**340**) has dominated modern history from the fifteenth century on.

had been founded in German lands before the close of the eighteenth century.[1] A normal school was established in Denmark, by royal decree, as early as 1789, and five additional schools when the law organizing public instruction in Denmark was enacted, in 1814. In France the beginnings of state action came with the action of the National Convention, which decreed the establishment of the "Superior Normal School for France," in 1794 (p. 517). This institution, though, was short lived, and the real beginnings of the French higher normal school awaited the reorganizing work of Napoleon, in 1808 (p. 595; **R. 283**).

The schools just mentioned represent the first institutions in the history of the world organized for the purpose of training teachers to teach. The teachers they trained, though, were intended primarily for the secondary schools, and the training was largely academic in character. Only in Silesia was any effort made, before the nineteenth century, to give training in special institutions to teachers intended for the vernacular schools. There Frederick the Great, in his "Regulations for the Catholic Schools of Silesia" (**R. 275, a** § 2) designated six cathedral and monastery schools as model schools, where teachers could "have the opportunity for learning all that is needed by a good teacher." In another place he defined this as "skill in singing and playing the organ sufficient to perform the services of the Church," and "the art of instructing the young in the German language" (**R. 275, a** § 1). So long as the instruction in the vernacular school consisted chiefly of reading and the Catechism, and of hearing pupils recite what they had memorized, there was of course but little need for any special training for the teachers. It was not until after Pestalozzi had done his work and made his contribution that there was anything worth mentioning to train teachers for.

Pestalozzi's contribution. The memorable work done by Pestalozzi in Switzerland, during his quarter-century (1800–25) of effort at Burgdorf and Yverdon, changed the whole face of the preparation of teachers problem. His work was so fundamental that it completely redirected the education of children. Taking

[1] The earliest Teachers' Seminaries in German lands were:

1750. Alfeld, in Hanover.
1753. Wolfenbüttel, in Brunswick.
1764. Glatz, in Prussia.
1765. Breslau, in Prussia.
1768. Carlsruhe, in Baden.
1771. Vienna, in Austria.
1777. Bamberg, in Bavaria.
1778. Halberstadt, in Prussia.
1779. Coburg, in Gotha.
1780. Segeberg, in Holstein.
1785. Dresden, in Saxony.
1794. Weissenfels, in Prussia.

the seed-thought of Rousseau that sense-impression was "the only true foundation of human knowledge" (**R. 267**), he enlarged this to the conception of the mental development of human beings as being organic, and proceeding according to law. His extension of this idea of Rousseau's led him to declare that education was an individual development, a drawing-out and not a pouring-in; that the basis of all education exists in the nature of man; and that the method of education is to be sought and constructed.[1] These were his great contributions. These ideas fitted in well with the rising tide of individualism which marked the late eighteenth and the early nineteenth centuries, and upon these contributions the modern secular elementary school has been built.

These ideas led Pestalozzi to emphasize sense perception and expression; to formulate the rule that in teaching we must proceed from the concrete to the abstract; and to construct a "faculty psychology" which conceived of education as "a harmonious development" of the different "faculties" of the mind. He also tried, unsuccessfully to be sure, to so organize the teaching process that eventually it could be so "mechanized" that there would be a regular A, B, C, for each type of instruction, which, once learned, would give perfection to a teacher. In his Report of 1800 (**R. 267**), which forms a very clear statement of his aims, he had said:

> I know what I am undertaking; but neither the difficulties in the way, nor my own limitations in skill and insight, shall hinder me from giving my mite for a purpose which Europe needs so much. . . . The most essential point from which I start is this: — Sense-impression of Nature is the only true foundation of human knowledge. All that follows is the result of this sense-impression, and the process of abstraction from it. . . .
>
> Then the problem I have to solve is this: — How to bring the elements of every art into harmony with the very nature of mind, by following the psychological mechanical laws by which mind rises from physical sense-impressions to clear ideas.

Largely out of these ideas and the new direction he gave to instruction the modern normal school for training teachers for the elementary schools arose.

Oral and objective teaching developed. Up to the time of

[1] "My views of the subject," said he, "came out of a personal striving after methods, the execution of which forced me actively and experimentally to seek, to gain, and to work out what was not there, and what I yet really knew not."

methodology soon became a great subject; the new subject of pedagogy began to take form and secure recognition; and psychology became the guiding science of the school.

As these changes took place, the normal school began to come into favor in the leading countries of Europe and in the United States, and in time has established itself everywhere as an important educational institution. Pestalozzi had himself conducted the first really modern teacher-training school, and his work was soon copied in a number of the Swiss cantons. Other cantons, on the contrary, for a time would have nothing to do with the new idea.

1. *The German States.* The first nation, though, to take up the teacher-training idea and establish it as an important part of its state school system was Prussia. Beginning in 1809 with the work of Zeller (p. 569), by 1840 there were thirty-eight Teachers' Seminaries, as the normal schools in German lands have been called, in Prussia alone. The idea was also quickly taken up by the other German States, and from the first decade of the nineteenth century on no nation has done more with the normal school, or used it, ends desired considered, to better advantage than have the Germans. One of the features of the Prussian schools which most impressed Professor Bache, when he visited the schools of the German States in 1838, was the excellence of the Seminaries for Teachers (**R. 344**), and these he described (**R. 345**) in some detail in his *Report.* Horace Mann, similarly, on his visit to Europe, in 1843, was impressed with the thoroughness of the training given prospective teachers in the Teachers' Seminaries of the German States (**R. 278**). University pedagogical seminars were also established early (c. 1810) [1] in the universities, for the training of secondary teachers, and this training was continued with increasing thoroughness up to 1914. Every teacher in the German States, elementary or secondary, before that date, was a carefully-trained teacher. This was a feature of the German state school systems of the pre-War period of which no other nation could boast.

2. *France.* After the German States, France probably comes next as the nation in which the normal school has been most used for training teachers. The Superior Normal School had been recreated in 1808 (**R. 283**), and after the downfall of Napoleon the creation of normal schools for elementary-school teachers was be-

[1] See footnote 1, page 573, for places and dates.

gun. Twelve had been established by 1830, and between 1830 and 1833 thirty additional schools for training these teachers were begun (R. 285). These rendered a service for France (R. 346) quite similar to that rendered by the Teachers' Seminaries in German lands. During the period of reaction, from 1848 to 1870, the normal school did not prosper in France, but since 1870 a normal school to train elementary teachers has been established for men and one for women in each of the eighty-seven departments into which France, for administrative purposes, has been divided. Satisfactory provision has also been made for the training of teachers for the secondary schools.

3. *The United States.* The United States has also been prominent, especially since about 1870, in the development of normal schools for the training of elementary teachers. The Lancastrian schools had trained monitors for their work, but the first teacher-training school in the United States to give training to individual teachers was opened privately,[1] in 1823, and the second in a similar manner,[2] in 1827. These were almost entirely academic institutions, being in the nature of tuition high schools, with a little practice teaching and some lectures on the "Art of Teaching" added in the last year of the course. In 1826 Governor Clinton recommended to the legislature of New York the establishment by the State of "a seminary for the education of teachers in the monitorial system of instruction." Nothing coming of this, in 1827 he recommended the creation of "a central school in each county for the education of teachers" (R. 349). That year (1827) the New York legislature appropriated money to aid the academies "to promote the education of teachers" — the first state aid in the United States for teacher-training.

The publication of an English edition of Cousin's *Report* (p. 597; R. 284) in New York, in 1835; Calvin E. Stowe's *Report on Elementary Education in Europe*,[3] in 1837; and Alexander D

[1] By the Reverend Samuel R. Hall, who conducted the school as an adjunct to his work as a minister. The school accordingly traveled about, being held at Concord, Vermont, from 1823 to 1830; at Andover, Massachusetts, from 1830 to 1837; and at Plymouth, New Hampshire, from 1837 to 1840.

[2] By James Carter, at Lancaster, Massachusetts.

[3] In 1836, Calvin Stowe, a professor in the Lane Theological Seminary at Cincinnati, went to Europe to buy books for the library of the institution, and the legislature of Ohio commissioned him to examine and report upon the systems of elementary education found there. The result was his celebrated *Report on Elementary Education in Europe*, made to the legislature in 1837. In it chief attention was given to contrasting the schools of Würtemberg and Prussia with those found in Ohio. The report was ordered printed by the legislature of Ohio, and later by the legislatures of Pennsylvania, Massachusetts, Michigan, North Carolina, and Virginia, and did much to awaken American interest in advancing common school education.

Bache's *Report on Education in Europe* (**Rs. 344, 345**), in 1838, with their strong commendations of the German teacher-training system, awakened new interest in the United States, in the matter of teacher-training. Finally, in 1839, the legislature of Massachusetts duplicated a gift of $10,000, and placed the money in the hands of the newly created State Board of Education (p. 689) to be used "in qualifying teachers for the common schools of Massachusetts" (**R. 350 a**). After careful consideration it was decided to create special state institutions, after the German and French plans, in which to give the desired training, and the French term of Normal School was adopted and has since become general in the United States.

On July 3, 1839, the first state normal school in the United States opened in the town hall at Lexington, Massachusetts, with

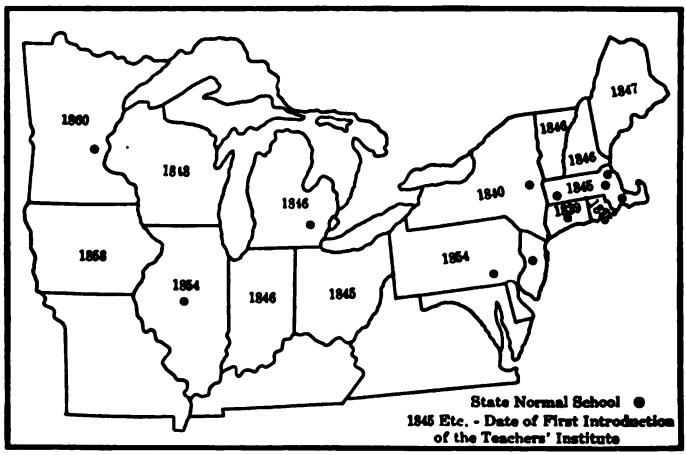


FIG. 225. TEACHER-TRAINING IN THE UNITED STATES BY 1860
A few private training-schools also existed, though less than half a dozen in all.

one teacher and three students. Later that same year a second state normal school was opened at Barre, and early the next year a third at Bridgewater, both in Massachusetts. For these the State Board of Education adopted a statement as to entrance requirements and a course of instruction (**R. 350 b**) which shows well the academic character of these early teaching institutions. Their success was largely due to the enthusiastic support given the new idea by Horace Mann. In an address at the dedication of the first building erected in America for normal-school purposes,

in 1846, he expressed his deep belief as to the fundamental importance of such institutions (R. 350 c). By 1860 eleven state normal schools had been established in eight of the States of the American Union, and six private schools were also rendering similar services. Closely related was the Teachers' Institute, first definitely organized by Henry Barnard in Connecticut, in 1839, to offer four- to six-weeks summer courses for teachers in service, and these had been organized in fifteen of the American States by 1860. Since 1870 the establishment of state normal schools has been rapid in the United States, two hundred having been established by 1910, and many since. The United States, though, is as yet far from having a trained body of teachers for its elementary schools. For the high schools, it is only since about 1890 that the professional training of teachers for such service has really been begun.

4. *England.* In England the beginnings of teacher-training came with the introduction of monitorial instruction, both the Bell and the Lancaster Societies (p. 625) finding it necessary to train pupils for positions as monitors, and to designate certain schools as model and training schools. In 1833, it will be remembered (p. 638), Parliament made its first grant of money in aid of education. Up to 1840 this was distributed through the two National Societies, and in 1839 a portion of this aid was definitely set aside to enable these Societies to establish model schools (R. 347). From this beginning, the model training-schools for the different religious Societies were developed. In these model schools prospective teachers were educated, being trained in religious instruction and in the art of teaching. In 1836, with the founding of the "Home and Colonial Infant Society," a Pestalozzian Training College was founded by it.

In a further effort to secure trained teachers the government, in 1846, adopted a plan then in use in Holland, and instituted what became known as the "pupil-teacher system" (R. 348). This was an improvement on the waning monitorial training system previously in use. Under this, a favorite old English method, used somewhat for the same purpose a century earlier (R. 243), was adapted to meet the new need. Under it promising pupils were apprenticed to a head teacher for five years (usually from thirteen to eighteen), he agreeing to give them instruction in both secondary-school subjects and in the art of teaching in return for their help in the schoolroom. Beginning in 1846, there were, by

1848, 200 pupil teachers; by 1861, 13,871; and by 1870, 14,612. This system formed the great dependence of England before the days of national education. In 1874 the pupil-teacher-center system was begun, and between 1878 and 1896 the age for entering as a pupil-teacher was raised from thirteen to sixteen, and the years of apprenticeship reduced from five to two. In most cases now the academic preparation continues to seventeen or eighteen, and is followed by one year of practice teaching in an elementary school, under supervision. After that the teacher may, or may not, enter what is there known as a Training-College.[1] So far the training of teachers has not made such headway in England and Wales as has been the case in the German States, France, the United States, or Scotland, but important progress may be expected in the near future as an outcome of new educational impulses arising as a result of the World War.

Spread of the normal-school idea. The movement for the creation of normal schools to train teachers for the elementary schools has in time spread to many nations. As nation after nation has awakened to the desirability of establishing a system of modern-type state schools, a normal school to train leaders has often been among the first of the institutions created. The normal school, in consequence, is found to-day in all the continental European States; in all the English self-governing dominions; in nearly all the South American States; and in China,[2] Japan, Siam, the Philippines, Cuba, Algiers, India, and other less important nations. In all these there is an attempt, often reaching as yet to but a small percentage of the teachers, to extend to them some of that training in the theory and art of instruction which has for long been so important a feature of the education of the elementary teacher in the German States, France, and the United States. Since about 1890 other nations have also begun to provide, as the German States and France have done for so

[1] These are higher institutions which offer two, three, or four years of academic and some professional education, and may be found in connection with a university; may be maintained by city or county school authorities; or may be voluntary institutions. In 1910–11 there were eighty-three such institutions in England and Wales.

[2] In China, for example, as soon as the new general system of education had been decided upon, normal schools of three types — higher normal schools, lower normal schools, and teacher-training schools — were created, and missionary teachers, foreign teachers, and students returning from abroad were used to staff these new schools. By 1910 as many as thirty higher normal schools, two hundred and three lower normal schools, and a hundred and eighty-two training classes had been established in China under government auspices. (Ping Wen Kuo, *The Chinese System of Public Education*, p. 156.)

long, some form of professional training for the teachers intended for their secondary schools [1] as well.

Psychology becomes the master science. Everywhere the establishment of normal schools has meant the acceptance of the newer conceptions as to child development and the nature of the educational process. These are that the child is a slowly developing personality, needing careful study, and demanding subject-matter and method suited to his different stages of development. The new conception of teaching as that of directing and guiding the education of a child, instead of hearing recitations and "keeping school," in time replaced the earlier knowledge-conception of school work. Psychology accordingly became the guiding science of the school, and the imparting to prospective teachers proper ideas as to psychological procedure, and the proper methodology of instruction in each of the different elementary-school subjects, became the great work of the normal school. Teachers thus trained carried into the schools a new conception as to the nature of childhood; a new and a minute methodology of instruction; and a new enthusiasm for teaching; — all of which were important additions to school work.

A new methodology was soon worked out for all the subjects of instruction, both old and new. The centuries-old alphabet method of teaching reading was superseded by the word and sound methods; the new oral language instruction was raised to a position of first importance in developing pupil-thinking; spelling, word-analysis, and sentence-analysis were given much emphasis in the work of the school; the Pestalozzian mental arithmetic came as an important addition to the old ciphering of sums; the old writing from copies was changed into a drill subject, requiring careful teaching for its mastery; the "back to nature" ideas of Rousseau and Pestalozzi proved specially fruitful in the new study of geography, which called for observation out of doors, the study of type forms, and the substitution of the physical and human aspects of geography for the older political and statistical; object lessons on natural objects, and later science and nature study, were used to introduce children to a knowledge of nature and to train them in thinking and observation; while the new subjects of music and drawing came in, each with an elaborate technique of instruction.

[1] The beginnings in the United States date from about 1890, and in England even later. In France, on the other hand, the training of teachers for the secondary schools goes back to the days of Napoleon.

By 1875 the normal school in all lands was finding plenty to do, and teaching, by the new methods and according to the new psychological procedure, seemed to many one of the most wonderful and most important occupations in the world. How great a change in the scope, as well as in the nature of elementary-school

1775	1825	1850	1875
READING Spelling Writing *Catechism* BIBLE Arithmetic	READING * *Declamation* SPELLING * *Writing* *Good Behavior* *Manners & Morals* ARITHMETIC *	READING DECLAMATION SPELLING WRITING Manners Conduct MENTAL ARITH. * CIPHERING	READING *Literary Selections* SPELLING PENMANSHIP * Conduct PRIMARY ARITH. * ADVANCED ARITH.
	Bookkeeping GRAMMAR Geography	Bookkeeping Elem. Language * GRAMMAR *Geography* History U.S.	 *Oral Language* * GRAMMAR Home Geography * TEXT GEOGRAPHY U.S. HISTORY *Constitution*
	Sewing and Knitting	Object Lessons	Object Lessons * Elementary Science * Drawing * Music * Physical Exercises

CAPITALS = Most important subjects. *Italics* = Subjects of medium importance.
Roman = Least important subjects. * = New methods of teaching now employed.

FIG. 226. EVOLUTION OF THE ELEMENTARY-SCHOOL CURRICULUM AND OF METHODS OF TEACHING

instruction had been effected in a century, the above diagram of American elementary-school development will reveal. History and literature, it will be noticed, had also come in as additional new subjects, but these were relatively unimportant in either the elementary school or the normal school until after the coming of Herbartian ideas, to which we shall refer a little further on.

Accompanying the organization of professional instruction for teachers, another important change in the nature of the elementary school was effected.

The grading of schoolroom instruction. For some time after elementary schools began it was common to teach all the children of the different ages together in one room, or at most in two rooms. In the latter case the subjects of instruction were divided

between the teachers, rather than the children.[1] Many of the pictures of early elementary schools show such mixed-type schools. In these the children were advanced individually and by subjects, as their progress warranted,[2] until they had progressed as far as the instruction went or the teacher could teach (**R. 352**). From this point on the division of the elementary school into classes and a graded organization has proceeded by certain rather well-defined steps.

The first step (**Rs. 353, 354**) was the division of the school into two schools, one more advanced than the other, such as lower and higher, or primary and grammar. Another division was introduced when the Infant School was added, beneath. The next step was the division of each school into classes. This began by the employment of assistant teachers, in England and America known as "ushers," to help the "master," and the provision of small recitation rooms, off the main large schoolroom, to which the usher could take his class to hear recitations. The third and final step came with the erection of a new type of school building, with smaller and individual classrooms, or the subdivision of the larger schoolrooms. It was then possible to assign a teacher to each classroom, sort and grade the pupils by ages and advancement, outline the instruction by years, and the modern graded elementary school was at hand.

The transition to the graded elementary school came easily and naturally. For half a century the course of instruction in the evolving elementary state school had been in process of expansion. Pestalozzi paved the way for its creation by changing the purpose and direction, and greatly enlarging (p. 543) the field of

[1] A common division was between the teacher who taught reading, religion, and spelling, and the teacher who taught writing and arithmetic (**R. 307**). Writing being considered a difficult art, this was taught by a separate teacher, who often included the ability to teach arithmetic also among his accomplishments.

[2] A good example of this may be found in the monitorial schools. The New York Free School Society (p. 660), for example, reported in its *Fourteenth Annual Report* (1819) that the children in its schools had pursued studies as follows:

297 children have been taught to form letters in sand.
615 have been advanced from letters in sand, to monosyllabic reading on boards.
686 from reading on boards, to Murray's First Book.
335 from Murray's First Book, to writing on slates.
218 from writing on slates, to writing on paper.
341 to reading in the Bible.
277 to addition and subtraction.
153 to multiplication and division.
60 to the compound of the four first rules.
20 to reduction.
24 to the rule of three.

instruction of the vernacular school. After him other new subjects of study were added (see diagram, Figure 226), new and better and longer textbooks were prepared (R. 351), and the school



FIG. 227. AN "USHER" AND HIS CLASS

The usher, or assistant teacher, is here shown with a class in one of the small recitation-rooms, off the large schoolroom.

term was gradually lengthened. The way in time became clear, earliest in the German lands and in a few American cities, but by about 1850 in most leading nations, for that simple reorganization of school work which would divide the school into a number of classes, or forms, or grades, and give one to each teacher to handle. When this point had been reached, which came about 1850 to 1860 in most nations, but earlier in a few, the modern type of town or city graded elementary school was at hand. Teaching had by this time become an organized and a psychological process; graded courses of study began to appear; professional school superintendents began to be given the direction and supervision of instruction; and the modern science of school organization and administration began to take shape. From this point on the further development of the graded elementary public school has come through the addition of new materials of instruction, and by changing the direction of the school to adapt it better to meeting the new needs of society brought about by the scientific, industrial, social, and political revolutions which we, in previous

chapters, have described. A few of the more important of these additions and changes in direction we shall now briefly describe.

II. NEW IDEAS FROM HERBARTIAN SOURCES

The work of Herbart. Taking up the problem as Pestalozzi left it, a German by the name of Johann Friedrich Herbart (1776–1841) carried it forward by organizing a truer psychology for the whole educational process, by erecting a new social aim for instruction, by formulating new steps in method, and by showing the place and the importance of properly organized instruction in history and literature in the education of the child. Though the two men were entirely different in type, and worked along entirely different lines, the connection between Herbart and Pestalozzi was, nevertheless, close.[1]

The two men, however, approached the educational problem from entirely different angles. Pestalozzi gave nearly all his long life to teaching and human service, while Herbart taught only as a traveling private tutor for three years, and later a class of twenty children in his university practice school. Pestalozzi was a social reformer, a visionary, and an impractical enthusiast, but was possessed of a remarkable intuitive insight into child nature. Herbart, on the other hand, was a well-trained scholarly thinker, who spent the most of his life in the peaceful occupation of a professor of philosophy in a German university.[2] It was while at Königsberg, between 1810 and 1832, and as an appendix to his work as professor of philosophy, that he organized a small practice school, conducted a Pedagogical Seminar, and worked out his educational theory and method. His work was a careful, scholarly attempt at the organization of education as a science, carried out amid the peace and quiet which a university atmosphere almost alone affords. He addressed himself chiefly to three things: (1) the aim, (2) the content, and (3) the method of instruction.[1]

The aim and the content of education. Locke had set up as

[1] Herbart had visited Pestalozzi at Burgdorf, in 1799, just after graduating from Jena and while acting as a tutor for three Swiss boys, and had written a very sympathetic description of his school and his theory of instruction. Herbart was one of the first of the Germans to understand and appreciate "the genial and noble Pestalozzi."

[2] The son of a well-educated public official, Herbart was himself educated at the *Gymnasium* of Oldenburg and the University of Jena. After spending three years as a tutor, he became, at the age of twenty-six, an under teacher at the University of Göttingen. At the age of thirty-three he was called to succeed Kant as professor of philosophy at Königsberg, and from the age of fifty-seven to his death at sixty-five he was again a professor at Göttingen.

the aim of education the ideal of a physically sound gentleman. Rousseau had declared his aim to be to prepare his boy for life by developing naturally his inborn capacities. Pestalozzi had sought to regenerate society by means of education, and to prepare children for society by a "harmonious training" of their "faculties." Herbart rejected alike the conventional-social education of Locke, the natural and unsocial education of Rousseau, and the "faculty-psychology" conception of education of Pestalozzi. Instead he conceived of the mind as a unity, instead of being divided into "faculties," and the aim of education as broadly social rather than personal. The purpose of education, he said, was to prepare men to live properly in organized society, and hence the chief aim in education was not conventional fitness, natural development, mere knowledge, nor personal mental power, but personal character and social morality. This being the case, the educator should analyze the interests and occupations and social responsibilities of men as they are grouped in organized society, and, from such analyses, deduce the means and the method of instruction. Man's interests, he said, come from two main sources — his contact with the things in his environment (real things, sense-impressions), and from his relations with human beings (social intercourse). His social responsibilities and duties are determined by the nature of the social organization of which he forms a part.

Pestalozzi had provided fairly well for the first group of contacts, through his instruction in objects, home geography, numbers, and geometric form. For the second group of contacts Pestalozzi had developed only oral language, and to this Herbart now added the two important studies of literature and history, and history with the emphasis on the social rather than the political side. Two new elementary-school subjects were thus developed, each important in revealing to man his place in the social whole. History in particular Herbart conceived to be a study of the first importance for revealing proper human relationships, and leading men to social and national "good-will."

The chief purpose of education Herbart held to be to develop personal character and to prepare for social usefulness (R. 355). These virtues, he held, proceeded from enough of the right kind of knowledge, properly interpreted to the pupil so that clear ideas as to relationships might be formed. To impart this knowledge interest must be awakened, and to arouse interest in the many kinds

of knowledge needed, a "many-sided" development must take place. From full knowledge, and with proper instruction by the teacher, clear ideas or concepts might be formed, and clear ideas ought to lead to right action, and right action to personal character — the aim of all instruction. Herbart was the first writer on education to place the great emphasis on proper instruction, and to exalt teaching and proper teaching-procedure instead of mere knowledge or intellectual discipline. He thus conceived of the educational process as a science in itself, having a definite content and method, and worthy of special study by those who desire to teach.

Herbartian method. With these ideas as to the aim and content of instruction, Herbart worked out a theory of the instructional process and a method of instruction (**R. 356**). Interest he held to be of first importance as a prerequisite to good instruction. If given spontaneously, well and good; but, if necessary, forced interest must be resorted to. Skill in instruction is in part to be determined by the ability of the teacher to secure interest without resorting to force on the one hand or sugar-coating of the subject on the other. Taking Pestalozzi's idea that the purpose of the teacher was to give pupils new experiences through contacts with real things, without assuming that the pupils already had such, Herbart elaborated the process by which new knowledge is assimilated in terms of what one already knows, and from his elaboration of this principle the doctrine of apperception — that is, the apperceiving or comprehending of new knowledge in terms of the old — has been fixed as an important principle in educational psychology. Good instruction, then, involves first putting the child into a proper frame of mind to apperceive the new knowledge, and hence this becomes a corner-stone of all good teaching method.

Herbart did not always rely on such methods, holding that the "committing to memory" of certain necessary facts often was necessary, but he held that the mere memorizing of isolated facts, which had characterized school instruction for ages, had little value for either educational or moral ends. The teaching of mere facts often was very necessary, but such instruction called for a methodical organization of the facts by the teacher, so as to make their learning contribute to some definite purpose. This called for a purpose in instruction; the organization of the facts necessary to be taught so as to select the most useful ones; the connec-

tion of these so as to establish the principle which was the purpose of the instruction; and training in systematic thinking by applying the principle to new problems of the type being studied. The carrying-out of such ideas meant the careful organization of the teaching process and teaching method, to secure certain predetermined ends in child development, instead of mere miscellaneous memorizing and school-keeping.

The Herbartian movement in Germany. Herbart died in 1841, without having awakened any general interest in his ideas, and they remained virtually unnoticed until 1865. In that year a professor at Leipzig, Tuiskon Ziller (1817–1883), published a book setting forth Herbart's idea of instruction as a moral force. This attracted much attention, and led to the formation (1868) of a scientific society for the study of Herbart's ideas. Ziller and his followers now elaborated Herbart's ideas, advanced the theory of culture-epochs in child development, the theory of concentration in studies, and elaborated the four steps in the process of instruction, as described by Herbart, into the five formal steps of the modern Herbartian school.

In 1874 a pedagogical seminary and practice school was organized at the University of Jena, and in 1885 this came under the direction of Professor William Rein, a pupil of Ziller's, who developed the practice school according to the ideas of Ziller. A detailed course of study for this school, filling two large volumes, was worked out, and the practice lessons given were thoroughly planned beforehand and the methods employed were subjected to a searching analysis after the lesson had been given.

Herbartian ideas in the United States. For a time, under the inspiration of Ziller and Rein, Jena became an educational center to which students went from many lands. From the work at Jena Herbartian ideas have spread which have modified elementary educational procedure generally. In particular did the work at Jena make a deep impression in the United States. Between 1885 and 1890 a number of Americans studied at Jena and, returning, brought back to the United States this Ziller-Rein-Jena brand of Herbartian ideas and practices.[1] From the first the new ideas met with enthusiastic approval.

[1] Charles De Garmo's *Essentials of Method*, published in 1889, marked the beginning of the introduction of these ideas into this country. In 1892 Charles A. McMurry published his *General Method*, and in 1897, with his brother, Frank, published the *Method in the Recitation*. These three books probably have done more to popularize Herbartian ideas and introduce them into the normal schools and colleges of the United States than all other influences combined. Another important



JOHANN FRIEDRICH HERBART (1776–1841)
Organizer of the Psychology of Instruction



FRIEDRICH WILHELM FROEBEL (1782–1852)
Founder of the Kindergarten

PLATE 6. TWO LEADERS IN THE REORGANIZATION OF EDUCATIONAL THEORY



New methods of instruction in history and literature, and a new psychology, were now added to the normal-school professional instruction. Though this psychology has since been outgrown (**R. 357**), it has been very useful in shaping pedagogical thought. New courses of study for the training-schools were now worked out in which the elementary-school subjects were divided into drill subjects, content subjects, and motor-activity subjects.[1] Apperception, interest, correlation, social purpose, moral education, citizenship training, and recitation methods became new terms to conjure with. From the normal schools these ideas spread rapidly to the better city school systems of the time, and soon found their way into courses of study everywhere. Practice schools and the model lessons in dozens of normal schools were remodeled after the pattern of those at Jena, and for a decade Herbartian ideas and the new child study vied with one another for the place of first importance in educational thinking. The Herbartian wave of the nineties resembled the Pestalozzian enthusiasm of the sixties. Each for a time furnished the new ideas in education, each introduced elements of importance into the elementary-school instruction, each deeply influenced the training of teachers in normal schools by giving a new turn to the instruction there, and each gradually settled down into its proper place in educational practice and history.

The Herbartian contribution. To the Herbartians we are indebted in particular for important new conceptions as to the teaching of history and literature, which have modified all our subsequent procedure; for the introduction of history teaching in some form into all the elementary-school grades; for the emphasis on a new social point of view in the teaching of history and geography; for the new emphasis on the moral aim in instruction; for a new and a truer educational psychology; and for a better organization of the technique of classroom instruction. In particular

influence was the "National Herbart Society," founded in 1892 by students returning from Jena, in imitation of the similar German society.

[1] The studies which have come to characterize the modern elementary school may now be classified under the following headings:

Drill subjects	*Content subjects*	*Expression subjects*
Reading	Literature	Kindergarten Work
Writing	Geography	Music
Spelling	History	Manual Arts
Language	Civic Studies	Domestic Arts
Arithmetic	Manners and Conduct	Plays and Games
	Nature Study	School Gardening
	Agriculture	Vocational Subjects

Herbart gave emphasis to that part of educational development which comes from without — environment acting upon the child — as contrasted with the emphasis Pestalozzi had placed on mental development from within and according to organic law. With the introduction of normal child activities, which came from another source about this same time, the elementary-school curriculum as we now have it was practically complete, and the elementary school of 1850 was completely made over to form the elementary school of the beginning of the twentieth century.

III. THE KINDERGARTEN, PLAY, AND MANUAL ACTIVITIES

To another German, Friedrich Froebel (1782–1852), we are indebted, directly or indirectly, for three other additions to elementary education — the kindergarten, the play idea, and handwork activities.

Origin of the kindergarten. Of German parentage, the son of a rural clergyman, early estranged from his parents, retiring and introspective by nature, having led a most unhappy childhood, and apprenticed to a forester without his wishes being consulted, at twenty-three Froebel decided to become a schoolteacher and visited Pestalozzi in Switzerland. Two years later he became the tutor of three boys, and then spent the years 1808–10 as a student and teacher in Pestalozzi's Institute at Yverdon. During his years there Froebel was deeply impressed with the great value of music and play in the education of children, and of all that he carried away from Pestalozzi's institution these ideas were most persistent. After serving in a variety of occupations — student, soldier against Napoleon, and curator in a museum of mineralogy — he finally opened a little private school, in 1816, which he conducted for a decade along Pestalozzian lines. In this the play idea, music, and the self-activity of the pupils were uppermost. The school was a failure, financially, but while conducting it Froebel thought out and published (1826) his most important pedagogical work — *The Education of Man.*

Gradually Froebel became convinced that the most needed reform in education concerned the early years of childhood. His own youth had been most unhappy, and to this phase of education he now addressed himself. After a period as a teacher in Switzerland he returned to Germany and opened a school for little children in which plays, games, songs, and occupations involving self-activity were the dominating characteristics, and in 1840 he hit

upon the name *Kindergarten* for it. In 1843 his *Mutter- und Kose-Lieder*, a book of fifty songs and games, was published. This has been translated into almost all languages.

Spread of the kindergarten idea. After a series of unsuccessful efforts to bring his new idea to the attention of educators, Froebel, himself rather a feminine type, became discouraged and resolved to address himself henceforth to women, as they seemed much more capable of understanding him, and to the training of teachers in the new ideas. Froebel was fortunate in securing as one of his most ardent disciples, just before his death, the Baroness Bertha von Marenholtz Bülow-Wendhausen (1810–93), who did more than any other person to make his work known. Meeting, in 1849, the man mentioned to her as "an old fool," she understood him, and spent the remainder of her life in bringing to the attention of the world the work of this unworldly man who did not know how to make it known for himself. In 1851 the Prussian Government, fearing some revolutionary designs in the new idea, and acting in a manner thoroughly characteristic of the political reaction which by that time had taken hold of all German official life, forbade kindergartens in Prussia. The Baroness then went to London and lectured there on Froebel's ideas, organizing kindergartens in the English "ragged schools." Here, by contrast, she met with a cordial reception. She later expounded Froebelian ideas in Paris, Italy, Switzerland, Holland, Belgium, and (after 1860, when the prohibition was removed) in Germany. In 1870 she founded a kindergarten training-college in Dresden. Many of her writings have been translated into English, and published in the United States.

Considering the importance of this work, and the time which has since elapsed, the kindergarten idea has made relatively small progress on the continent of Europe. Its spirit does not harmonize with autocratic government. In Germany and the old Austro-Hungary it had made but little progress up to 1914. Its greatest progress in Europe, perhaps, has been in democratic Switzerland.[1] In England and France, the two great leaders in democratic government, the Infant-School development, which came earlier, has prevented any marked growth of the kinder-

[1] Next, perhaps, would come Italy, which is strongly democratic in spirit. In the cities of Holland one finds many privately supported kindergartens, but the State has not made them a part of the school system. In Norway and Sweden the kindergarten practically does not exist. The kindergarten will always do best among self-governing peoples, and seldom meets with favor from autocratic power.

garten. In England, though, the Infant School has recently been entirely transformed by the introduction into it of the kindergarten spirit.[1] In France, infant education has taken a somewhat different direction.[2]

In the United States the kindergarten idea has met with a most cordial reception. In no country in the world has the spirit of the kindergarten been so caught and applied to school work, and probably nowhere has the original kindergarten idea been so expanded and improved.[3] The first kindergarten in the United States was a German kindergarten, established at Watertown, Wisconsin, in 1855, by Mrs. Carl Schurz, a pupil of Froebel. During the next fifteen years some ten other kindergartens were organized in German-speaking communities. The first English-speaking kindergarten was opened privately in Boston, in 1860, by Miss Elizabeth Peabody. In 1868 a private training-college for kindergartners was opened in Boston, largely through Miss Peabody's influence, by Madame Matilde Kriege and her daughter, who had recently arrived from Germany. In 1872 Miss Marie Boelte opened a similar teacher-training school in New York City, and in 1873 her pupil, Miss Susan Blow, accepted the invitation of Superintendent William T. Harris, of St. Louis, to go there and open the first public-school kindergarten in the United States.[4]

[1] "In the best English Infant Schools a profound revolution has taken place in recent years. Formal lessons in the 3 Rs have disappeared, and the whole of the training of the little ones has been based on the principles of the kindergarten as enunciated by Froebel. Much of the old routine still remains; nevertheless there is no part of the English educational system so brimful of real promise as the work that is now being done in the best Infant Schools." (Hughes, R. E., *The Making of Citizens* (1902), p. 40.)

[2] In France, the Infant School or kindergarten is known as the Maternal School. Pupils are received at two years of age, and carried along until six. In the lower division the school is largely in the nature of a day nursery, but in the upper division many of the features of the kindergarten are found.

[3] Since Froebel's day we have learned much about children that was then unknown, especially as to the muscular and nervous organization and development of children, and with this new knowledge the tendency has been to enlarge the "gifts" and change their nature, to introduce new "occupations," elaborate the kindergarten program of daily exercises, and to give the kindergarten more of an out-of-door character. Especially has the work of Dewey (p. 780) and the child-study specialists been important in modifying kindergarten procedure.

[4] By 1880 some 300 kindergartens and 10 kindergarten training-schools, mostly private undertakings, had been opened in the cities of thirty of the States of the Union. By 1890 philanthropic kindergarten associations to provide and support kindergartens had been organized in most of the larger cities, and after that date cities rapidly began to adopt the kindergarten as a part of the public-school system, and thus add, at the bottom, one more rung to the American educational ladder. To-day there are approximately 9000 public and 1500 private kindergartens in the cities of the United States, and training in kindergarten principles and practices is now given by many of the state normal schools.

To-day the kindergarten is found in some form in nearly all countries in the world, having been carried to all continents by missionaries, educational enthusiasts, and interested governments.[1] Japan early adopted the idea, and China is now beginning to do so.

The kindergarten idea. The dominant idea in the kindergarten is natural but directed self-activity, focused upon educational, social, and moral ends. Froebel believed in the continuity of a child's life from infancy onward, and that self-activity, determined by the child's interests and desires and intelligently directed, was essential to the unfolding of the child's inborn capacities. He saw, more clearly than any one before him had done, the unutilized wealth of the child's world; that the child's chief characteristic is self-activity; the desirability of the child finding himself through play; and that the work of the school during these early years was to supplement the family by drawing out the child and awakening the ideal side of his nature. To these ends doing, self-activity, and expression became fundamental to the kindergarten, and movement, gesture, directed play, song, color, the story, and human activities a part of kindergarten technique. Nature study and school gardening were given a prominent place, and motor-activity much called into play. Advancing far beyond Pestalozzi's principle of sense-impressions, Froebel insisted on motor-activity and learning by doing (**R. 358**).

Froebel, as well as Herbart, also saw the social importance of education, and that man must realize himself not independently amid nature, as Rousseau had said, but as a social animal in coöperation with his fellowmen. Hence he made his schoolroom a miniature of society, a place where courtesy and helpfulness and social coöperation were prominent features. This social and at times reverent atmosphere of the kindergarten has always been a marked characteristic of its work. To bring out social ideas many dramatic games, such as shoemaker, carpenter, smith, and farmer, were devised and set to music. The "story" by the teacher was made prominent, and this was retold in language, acted, sung, and often worked out constructively in clay, blocks, or paper. Other games to develop skill were worked out, and use was made of sand, clay, paper, cardboard, and color. The

[1] In 1918, for example, according to a recent Report to the Zionist Board of Education in the United States, there were over 5300 children in kindergartens in Palestine, 125 kindergarten teachers there, and a College for Kindergarten Teachers had been organized in the Holy Land to train additional teachers.

"gifts" and "occupations" which Froebel devised were intended to develop constructive and æsthetic power, and to provide for connection and development they were arranged into an organized series of playthings. Individual development as its aim, motor-expression as its method, and social coöperation as its means were the characteristic ideas of this new school for little children (R. 358).

The contribution of the kindergarten. Wholly aside from the specific training given children during the year, year and a half, or two years they spend in this type of school, the addition of the kindergarten to elementary-school work has been a force of very large significance and usefulness. The idea that the child is primarily an active and not a learning animal has been given new emphasis, and that education comes chiefly by doing has been given new force. The idea that a child's chief business is play has been a new conception of large educational value. The elimination of book education and harsh discipline in the kindergarten has been an idea that has slowly but gradually been extended upward into the lower grades of the elementary school.

To-day, largely as a result of the spreading of the kindergarten spirit, the world is coming to recognize play and games at something like their real social, moral, and educational values, wholly aside from their benefits as concern physical welfare, and in many places directed play is being scheduled as a regular subject in school programs. Music, too, has attained new emphasis since the coming of the kindergarten, and methods of teaching music more in harmony with kindergarten ideas have been introduced into the schools.

Instruction in the manual activities. Froebel not only introduced constructive work — paper-folding, weaving, needlework, and work with sand and clay and color — into the kindergarten, but he also proposed to extend and develop such work for the upper years of schooling in a school for hand training which he outlined, but did not establish. His proposed plan included the elements of the so-called manual-training idea, developed later, and he justified such instruction on the same educational grounds that we advance to-day. It was not to teach a boy a trade, as Rousseau had advocated, or to train children in sense-perception, as Pestalozzi had employed all his manual activities, but as a form of educational expression, and for the purpose of developing creative power within the child. The idea was advocated by a

number of thinkers, about 1850 to 1860, but the movement took its rise in Finland, Sweden, and Russia.

The first country to organize such work as a part of its school instruction was Finland, where, as early as 1858, Uno Cygnaeus (1810–1888) outlined a course for manual training involving bench and metal work, wood-carving, and basket-weaving. In 1866 Finland made some form of manual work compulsory for boys in all its rural schools, and in its training-colleges for male teachers. In 1872 the government of Sweden decided to introduce sloyd work into its schools, partly to counteract the bad physical and moral effects of city congestion, and partly to revivify the declining home industries of the people. A sloyd school was established at Naäs, in 1872, to train teachers, and in 1875 a second school, known as a "Sloyd Seminarium," was begun. The summer courses of these two schools were soon training teachers from many nations. In 1877 sloyd work was added to the Folk School instruction of Sweden. At first the old native sloyd occupations were followed, such as carpentering, turning, wood-carving, brush-making, book-binding, and work in copper and iron, but later the industrial element gave way to a well-organized course in educational tool work for boys from twelve to fifteen years of age, after the Finnish plan.

Spread of the manual-training idea. France was the first of the larger European nations to adopt this new addition to elementary-school instruction, a training-school being organized at Paris in 1873, and, in 1882, the instruction in manual activities was ordered introduced into all the primary schools of France. It has required time, though, to provide work rooms and to realize this idea, and it is still lacking in complete accomplishment. In England the work was first introduced in London, about 1887. The government at once accepted the idea, encouraged its spread, and began to aid in the training of teachers. By 1900 the work was found in all the larger cities, and included cooking and sewing for girls, as well as manual work for boys. The training for girls goes back still farther, and was an outgrowth of the earlier "schools of industry" established to train girls for domestic service (**R. 241**). By 1846 instruction in needlework had been begun in earnest in England. In German lands needlework was also an early school subject, while some domestic training for girls had been provided in most of the cities, before 1914. Manual training for boys, though, despite much propaganda work, had

made but little headway up to that time. As in the case of the kindergarten, the initiative and self-expression aspects of the manual-training movement made no appeal to those responsible for the work of the people's schools, and, in consequence, the manual activities have in German lands been reserved largely for the continuation and vocational schools for older pupils.

In the United States the manual-training and household-arts ideas have found a very ready welcome. Curious as it may seem, the first introduction to the United States of this new form of instruction came through the exhibit made by the Russian government at the Centennial Exhibition of 1876, showing the work in wood and iron made by the pupils at the Imperial Technical Institute at Moscow. This, however, was not the Swedish sloyd, but a type of work especially adapted to secondary-school instruction. In consequence the movement for instruction in the manual activities in the United States, unlike in other nations, began as a highly organized technical type of high-school instruction,[1] while the elementary-school sloyd and the household arts for girls came in later. This type of technical high school has since developed rapidly in this country, has rendered an important educational service, and is a peculiarly American creation. In Europe the manual-training idea has been confined to the elementary school, and no institution exists there which parallels these costly and well-equipped American technical secondary schools.

The introduction of manual work into the elementary schools came a little later, and a little more slowly. As early as 1880 the Workingmen's School, founded by the Ethical Culture Society of New York, had provided a kindergarten and had extended the kindergarten constructive-work idea upward, in the form of simple woodworking, into its elementary school. In the public schools, experimental classes in elementary-school woodworking were tried in one school in Boston, as early as 1882, the expense being borne privately. In 1888 the city took over these classes.

[1] The Saint Louis Manual Training High School, founded in 1880 in connection with Washington University, first gave expression to this new form of education, and formed a type for the organization of such schools elsewhere. Privately supported schools of this type were organized in Chicago, Toledo, Cincinnati, and Cleveland before 1886, and the first public manual-training high schools were established in Baltimore in 1884, Philadelphia in 1885, and Omaha in 1886. The shop-work, based for long on the "Russian system," included wood-turning, joinery, pattern-making, forging, foundry and machine work. The first high school to provide sewing, cooking, dressmaking, and millinery for girls was the one at Toledo, established in 1886, though private classes had been organized earlier in a number of cities.

In 1886 a teacher was brought to Boston from Sweden to introduce Swedish sloyd, and a teacher-training school which has been very influential was established there, in 1889. In 1876 Massachusetts permitted cities to provide instruction in sewing, and Springfield introduced such instruction in 1884, and elementary-school instruction in knifework in 1886.

From these beginnings the movement spread,[1] though at first rather slowly. By 1900 approximately forty cities, nearly all of them in the North Atlantic group of States, had introduced work in manual training and the household arts into their elementary schools, but since that time the work has been extended to practically all cities, and to many towns and rural communities as well.



FIG. 228.
REDIRECTED MANUAL TRAINING
A boy mending his shoe instead of making a mortice-joint

Contribution of the manual-activities idea. These new forms of school work were at first advocated on the grounds of formal discipline — that they trained the reasoning, exercised the powers of observation, and strengthened the will. The "exercises," true to such a conception, were quite formal and uniform for all. With the breakdown of the "faculty psychology," and the abandonment in large part of the doctrine of formal discipline in the training of the mind, the whole manual-training and household-arts work has had to be reshaped. As the writings of Pestalozzi, Herbart, and Froebel were studied more closely, and with the new light on child development gained from child-study and the newer psychology, these new subjects came to be conceived of

[1] A few of the earlier adaptations of the idea may be given. In 1882 Montclair, New Jersey, introduced manual training into its elementary schools, and in 1885 the State of New Jersey first offered state aid to induce the extension of the idea. In 1885 Philadelphia added cooking and sewing to its elementary schools, having done so in the girls' high school five years earlier. In 1888 the City of New York added drawing, sewing, cooking, and woodworking to its elementary-school course of study.

in their proper light as means of individual expression, and to be extended to new forms, materials, colors, and new practical and artistic ends. To-day the instruction in manual work and the household arts in all their forms has been further changed to make of them educational instruments for interpreting the fields of art and industry and home-life in terms of their social significance and usefulness. Through these two new forms of education, also, the pupils in the elementary schools have been given training in expression and an insight into the practical work of life impossible in the old textbook type of elementary school. In the kindergarten, manual work, and the household arts, Froebel's principle of education through directed self-activity and self-expression has borne abundant fruit.

In the hands of French, English, and American educators the original manual-arts idea has been greatly expanded. In France some form of expression has been worked out for all grades of the primary school, and the work has been closely connected with art and industry on the one hand and with the home-life of the people on the other. In England the project system as applied to industry, and the household arts with reference to home-life, have been emphasized. In the United States the work has been individualized perhaps more than anywhere else, applied in many new directions — clay, leather, cement, metal — and used as a very important instrument for self-expression and the development of individual thinking.

IV. THE ADDITION OF SCIENCE STUDY

The gradual extension of the interest in science. A very prominent feature of world educational development, since about the middle of the nineteenth century, has been the general introduction into the schools of the study of science. It is no exaggeration of the importance of this to say that no addition of new subject-matter and no change in the direction and purpose of education, since that time, has been of greater importance for the welfare of mankind, or more significant of new world conditions, than has been the emphasis recently placed, in all divisions of state school systems, on instruction in the principles and the applications of science.

From the days of Francis Bacon (p. 390) on, the study of science has been making slow but steady progress. The early history of modern science we traced in chapter XVII. During the seven-

teenth century English scholars were most prominent in the further development, due largely to the greater tolerance of new ideas there, and the University of Cambridge early attained to some reputation (p. 423) as a place where instruction in the new scientific studies might be found. After the middle of the eighteenth century, in large part due to the illuminating work of Voltaire (p. 485), a great interest in science arose among the French. In the Revolutionary days we accordingly find the French creating important scientific institutions (p. 518), and Napoleon gave frequent evidence of his deep interest in scientific studies.[1] This interest the French have since retained.

From France this new interest in science passed quickly to the Germans. The new mathematical and physical studies had early found a home at the new University of Göttingen (p. 555), and largely under French influences scientific studies were later introduced into all the German universities. Early in the nineteenth century the German universities took the lead as centers for the new scientific studies (p. 576) — a lead they retained throughout the century. In England the universities had, by the nineteenth century, lost much of their seventeenth-century prominence in science, and had settled down into teaching colleges, instead of developing, as had the German universities, into institutions for scientific research. Compared with the reformed German universities, actuated by the new scientific spirit, the English universities of the mid-nineteenth century presented a very unfavorable [2] aspect (R. 359). In the United States, book instruction in the sciences came in near the close of the eighteenth century, but the first laboratory instruction in our colleges was not begun until 1846, and our real interest in science teaching dates from an even later period. Until the coming of German influences, after the middle of the century, the American college [3] largely followed English models and practices.

[1] In 1802 Napoleon provided for instruction in natural history, astronomy, chemistry, physics, and mineralogy in the scientific course of the *lycées*, and in 1814 enlarged this instruction. He also established numerous technical and military schools, with instruction based on mathematics and science.

[2] The Royal Commissioners which reported on the condition of the University of Oxford, in 1850, said: "It is generally acknowledged that both Oxford and the country at large suffer greatly from the absence of a body of learned men devoting their lives to the cultivation of science, and to the direction of academical education. The fact that so few books of profound research emanate from the University of Oxford materially impairs its character as a seat of learning, and consequently its hold on the respect of the nation."

[3] Book instruction in the new sciences goes back, in the universities of most lands, to the late eighteenth century, but laboratory instruction is a much more recent

Yet, as we pointed out earlier, the early nineteenth century witnessed a vast expansion of scientific knowledge, and by 1860 the main keys of modern science (p. 727) were in the hands of scholars everywhere. The great early development of scientific study had been carried on in a few universities or had been done by independent scholars, and had influenced but little instruction in the colleges or the schools below.

Science instruction reaches the schools but slowly. The textbook organization of this new scientific knowledge, for teaching purposes, and its incorporation into the instruction of the schools, took place but slowly.

1. *The elementary schools.* The greatest and the earliest success was made in German lands. There the pioneer work of Basedow (p. 534) and the Philanthropinists had awakened a widespread interest in scientific studies. In Switzerland, too, Pestalozzi had developed elementary science study and home geography, and, when Pestalozzian methods were introduced into the schools of Prussia, the study of elementary science (*Realien*) soon became a feature of the *Volksschule* instruction. From Prussia it spread to all German lands. In England the Pestalozzian idea was introduced into the Infant Schools,[1] though in a very formal fashion, under the heading of object lessons. In this form elementary science study reached the United States, about 1860, though a decade later well-organized courses in elementary science instruction began to be introduced into the American elementary schools.[2]

After the political reaction following the Napoleonic wars had set in, on the continent of Europe, all thought-provoking studies were greatly curtailed in the people's schools. In England, for

development. Chemistry was the first science to develop, being the mother of science instruction, and probably the first chemical laboratory in the world to be opened to students was that of Liebig at Giessen, in 1826. The first American university to provide laboratory instruction in chemistry was Harvard, in 1846. The instruction in science in most of the universities, up to at least 1850, was book instruction. (See schedule of studies for University of Michigan, R. 331.) The first American university to be founded on the German model was Johns Hopkins, in 1876.

[1] By Charles Mayo and his sister, who opened a private Pestalozzian school, about 1825. Miss Mayo published her *Lessons on Objects*, explaining the method, and this became very popular in England after about 1830. Both the Mayos were prominent in the Infant-School movement, which adopted a formalized type of Pestalozzian procedure.

[2] In 1871 Dr. William T. Harris, then Superintendent of City Schools in Saint Louis, published a well-organized course for the orderly study of the different sciences. This attracted wide attention, and was in time substituted for the scattered lessons on objects which had preceded it. This in turn has largely given way, in the lower grades, to nature study.

other reasons, object lessons did not make any marked headway, and as late as 1865 practically nothing relating to the great new world of scientific knowledge had as yet been introduced into the private and religious elementary schools (**R. 360**) which, up to that time, constituted England's chief dependence for the elementary instruction of her people.

2. *The secondary schools.* In the secondary schools the earliest work of importance in introducing the new scientific subjects was done by the Germans and the French. In German lands the *Realschule* obtained an early start (1747; p. 420), and the instruction in mathematics and science it included [1] had begun to be adopted by the German secondary schools, especially in the South German States, before the period of reaction set in. During the reign of Napoleon the scientific course in the French *Lycées* was given special prominence. After about 1815, and continuing until after 1848, practical and thought-provoking studies were under an official ban in both countries, and classical studies were specially favored.[2] Finally, in 1852 in France and in 1859 in Prussia, responding to changed political conditions and new economic demands, both the scientific course in the *Lycées* and the *Realschulen* were given official recognition, and thereafter received increasing state favor and support. The scientific idea also took deep root in Denmark. There the secondary schools were modernized, in 1809, when the sciences were given an important place, and again in 1850, when many of the Latin schools were transformed into *Realskoler*.

In the United States the academies and the early high schools both had introduced quite an amount of mathematics and book-science,[3] and, after about 1875, the development of laboratory instruction in science in the growing high schools took place rather rapidly. Fellenberg's work in Switzerland (p. 546) had also awakened much interest in the United States, and by 1830 a

[1] At the time of Professor Bache's visit, in 1838, the instruction included Latin, French, English, German, history, religion, music, drawing, mathematics, natural history, physics, chemistry, and geography.

[2] Scientific instruction in the *lycées* was not in favor in France after 1815, and in 1840 it was materially reduced, on the ground that it was injuring classical studies.

[3] Astronomy, botany, chemistry, and natural philosophy had been prominent studies in the American academies. Between about 1825 and 1840 was the great period of their introduction. The first American high school (Boston, 1821) provided for instruction in geography, navigation and surveying, astronomy, and natural philosophy. By 1850 the rising high schools were incorporating scientific studies quite generally. The instruction was still textbook instruction, but some lecture-table demonstrations had begun to be common.

number of Schools of Industry and Science had begun to appear.[1] These made instruction in mathematics and science prominent features of their work.

After the Napoleonic wars, England attained to the first place as an industrial and commercial nation. This led to a continual agitation on the part of manufacturers for some science and art instruction. In 1853, Parliament created a State Department of Science and Art (p. 638), and the promotion of science and art education by government grants was now begun. Though the nation had been the first to be transformed by the industrial revolution, and its foreign trade by 1850 reached all parts of the world, the secondary schools of England had remained largely untouched by the change. They were still mainly the Renaissance Latin grammar schools they had been ever since Dean Colet (1510) marked out the lines for such instruction by founding his reformed grammar school at St. Pauls (p. 275). Their courses of instruction contained little that was modern, and in their aims and purposes they went back to the days of the Revival of Learning for their inspiration (**R. 361**).

The challenge of Herbert Spencer. By the middle of the nineteenth century the scientific and industrial revolutions had produced important changes in the conditions of living in all the then important world nations. Particularly in the German States, France, England, and the United States had the effects of the revolutions in manufacturing and living been felt. In consequence there had been, for some time, a growing controversy between the partisans of the older classical training and the newer scientific studies as to their relative worth and importance, both for intellectual discipline and as preparation for intelligent living, and by the middle of the nineteenth century this had become quite sharp. The "faculty psychology," upon which the theory of the discipline of the powers of the mind by the classics was largely based, was attacked, and the contention was advanced that the content of studies was of more importance in education than was method and drill. The advocates of the newer studies contended that a study of the classics no longer provided a suitable preparation for intelligent living, and the question of the relative worth of the older and newer studies elicited more and more discussion as the century advanced.

[1] The Oneida School of Science and Industry, the Genesee Manual-Labor School, the Aurora Manual-Labor Seminary, and the Rensselaer School, all founded in the State of New York, between 1825 and 1830, were among the most important of these early institutions.

In 1859 one of England's greatest scholars, Herbert Spencer, brought the whole question to a sharp issue by the publication of a remarkably incisive essay on "What Knowledge is of Most Worth?" In this he declared that the purpose of education was to "prepare us for complete living," and that the only way to judge of the value of an educational course was first to classify, in the order of their importance,[1] the leading activities and needs of life, and then measure the course of study by how fully it offers such a preparation. Doing so (R. 362), and applying such a test, he concluded that of all subjects a knowledge of science (R. 363) "was always most useful for preparation for life," and therefore the type of knowledge of most worth. In three other essays[2] he recommended a complete change from the classical type of training which had dominated English secondary education since the days of the Renaissance. Still more, instead of a few being educated by a "cultural discipline" for a life of learning and leisure, he urged general instruction in science, that all might receive training and help for the daily duties of life.



FIG. 229. HERBERT SPENCER (1820–1903)

These essays attracted wide attention, not only in England but in many other lands as well. They were a statement, in clear and forceful English, of the best ideas of the educational reformers for three centuries. In his statement of the principles upon which sound intellectual education should be based he merely enunciated theses for which educational reformers had stood since the days of Ratke and Comenius. In his treatment of moral and

[1] Spencer's classification of life activities and needs, in the order of their importance, was (R. 362):

1. Those ministering directly to self-preservation.
2. Those which secure for one the necessities of life, and hence minister indirectly to self-preservation.
3. Those which have for their end the rearing and discipline of offspring.
4. Those involved in the maintenance of proper social and political relations.
5. Those which fill up the leisure part of life, and are devoted to the gratification of tastes and feelings.

[2] All were republished in book form, in 1861, under the title of *Education; Intellectual, Moral, and Physical.* The volume contains four essays: What Knowledge is of Most Worth?; Intellectual Education; Moral Education; and Physical Education. The first essay served as an introduction to the other three.

physical education he voiced the best ideas of John Locke. Spencer's great service was in giving forceful expression to ideas which, by 1860, had become current, and in so doing he pushed to the front anew the question of educational values. The scientific and industrial revolutions had prepared the way for a redirection of national education, and the time was ripe in England, France, German lands, and the United States for such a discussion. As a result, though the questions he raised are still in part unsettled, a great change in assigned values has since been effected not only in these nations, but in most other nations and lands which have drawn the inspiration for their educational systems from them. Though his work was not specially original, we must nevertheless class Herbert Spencer as one of the great writers on educational aims and purposes, and his book as one of the great influences in reshaping educational practice. He gave a new emphasis to the work of all who had preceded him, and out of the discussion which ensued came a new and a greatly enlarged estimate as to the importance of science study in all divisions of the school.

The new educational purpose. It is perhaps not too much to say that out of Spencer's gathering-up and forceful statement of the best ideas of his time, and the discussion which followed, a new conception of the educational purpose as adjustment to the life one is to live — physical, economic, social, moral, political — was clearly formulated, and a new definition of a liberal education was framed. The former found expression in a rather rapid introduction of science-study into the elementary school, the secondary school, and the college, after about 1865, in the school systems of all progressive nations, and the subsequent extension of the scientific method to such new fields as history, politics, government, and social welfare. The latter — the new definition of a liberal education — was wonderfully well stated in an address (1868) by the English scientist, Thomas Huxley, when he said: [1]



FIG. 230. THOMAS H. HUXLEY (1825–95)

[1] "A Liberal Education," in his *Science and Education*, p. 86.

That man, I think, has had a liberal education who has been so trained in youth that his body is the ready servant of his will, and does with ease and pleasure all the work that, as a mechanism, it is capable of; whose intellect is a clear, cold, logic engine, with all its parts of equal strength, and in smooth working order; ready, like a steam engine, to be turned to any kind of work, and spin the gossamers as well as forge the anchors of the mind; whose mind is stored with a knowledge of the great and fundamental truths of Nature and of the laws of her operations; one who, no stunted ascetic, is full of life and fire, but whose passions are trained to come to heel by a vigorous will, the servant of a tender conscience; who has learned to love all beauty, whether of Nature or of art, to hate all vileness, and to respect others as himself.

Such an one and no other, I conceive, has had a liberal education; for he is, as completely as a man can be, in harmony with Nature. He will make the best of her, and she of him. They will get on together rarely: she as his ever-beneficent mother; he as her mouthpiece, her conscious self, her minister and interpreter.

The inter-relation between the movement for the study of the sciences and the other movements for the improvement of instruction which we have so far described in this chapter, was close. Pestalozzi had emphasized instruction in geography and the study of nature; Froebel had given a prominent place to nature study and school gardening; the manual-arts work tended to exhibit industrial processes and relationships; and the scientific emphasis on content rather than drill was in harmony with the theories of all the modern reformers. Still more, the scientific movement was in close harmony with the new individualistic tendency of the early part of the nineteenth century, and with the movements for the improvement of individual and national welfare which have been so prominent a characteristic of the latter half of the century.

V. SOCIAL MEANING OF THESE CHANGES

A century of progress. Pestalozzi, true to the individualistic spirit of the age in which he lived and worked, had seen education as an individual development, and the ends of education as individual ends. The spirit of the French Revolutionary period was the spirit of individualism. With the progress of the Industrial Revolution and the consequent rise of new social problems, the emphasis was gradually shifted from the individual to society — from the single man to the man in the mass. The first educational thinker of importance to see and clearly state this new conception in terms of the school was Herbart. Seeing the educa-

tional purpose in far clearer perspective than had those who had gone before him, he showed that education must have for its function the preparation of man to live in organized society, and that character and social morality, rather than individual development, must in consequence be the larger aims. Froebel, possessed of something of the same insight, and seeing clearly the educational importance of activity and expression, had opened up for children a wealth of new contacts with the world about them in the new type of educational institution which he created. His principles, he said, when thoroughly worked out and applied to education "would revolutionize the world." He did not complete the full educational organization he had planned, but in the hands of the Swedes and Finns similar ideas were worked out in practical form and made a part of school work. Applying Froebel's idea to instruction in the old trades and industries, declining in importance in the face of the rise of the factory system, they evolved the manual-training activities, and these have since been made important tools for giving to young people some intelligent ideas as to the industrial relationships and economic problems of our complex modern life.

Since this early pioneer work changes in school work have been numerous and of far-reaching importance. The methods and purpose of instruction in the older subjects have been revised; new studies, which would serve to interpret to the young the industrial and social revolutions of the nineteenth century, have been introduced; the expression-subjects — the domestic arts, music, drawing, clay-modeling, color work, the manual arts, nature study, gardening — have given a new direction to school work; and the study of science and the vocations has attained to a place of importance previously unknown. During the past half-century the school has been transformed, in the principal world nations, from a disciplinary institution where drill in mastering the rudiments of knowledge was given, into an instrument of democracy calculated to train young people for living, for useful service in the office and shop and home, and to prepare them for intelligent participation in the increasingly complex social and political and industrial life of a modern world. This transformation of the school has not always been easy (**R. 365**), but the vastly changed conditions of modern life have demanded such a transformation in all progressive nations.

The contribution of John Dewey. The foremost American in-

terpreter, in terms of the school, of the vast social and industrial changes which have marked the nineteenth century, is John Dewey[1] (1859–). Better perhaps than any one else he has thought out and stated a new educational philosophy, suited to the changed and changing conditions of human living. His work, both experimental and theoretical, has tended both to re-psychologize (R. 364) and socialize education; to give to it a practical



FIG. 231. A REORGANIZED KINDERGARTEN

Drawn from a photograph showing the reconstruction of the kindergarten activities, as worked out by Dewey at Chicago.

content, along scientific and industrial lines; and to interpret to the child the new social and industrial conditions of modern society by connecting the activities of the school closely with those of real life.

Starting with the premises that "the school cannot be a preparation for social life except as it reproduces the typical conditions of social life"; that "industrial activities are the most influential factors in determining the thought, the ideals, and the social organization of a people"; and that "the school should be life, not a

[1] For many years head of the School of Education at the University of Chicago, but more recently Professor of Philosophy at Columbia University, New York City.

QUESTIONS FOR DISCUSSION

1. How do you explain the long-continued objection to teacher-training?
2. Contrast "oral and objective teaching" with the former "individual instruction."
3. Show how complete a change in classroom procedure this involved.
4. Show how Pestalozzian ideas necessitated a "technique of instruction."
5. Why is it that Pestalozzian ideas as to language and arithmetic instruction have so slowly influenced the teaching of grammar, language, and arithmetic?
6. How do you explain the decline in importance of the once-popular mental arithmetic?
7. Show how child study was a natural development from the Pestalozzian psychology and methodology.
8. Explain what is meant by the statements that Herbart rejected:
 (*a*) The conventional-social ideal of Locke.
 (*b*) The unsocial ideal of Rousseau.
 (*c*) The "faculty-psychology" conception of Pestalozzi.
9. Explain what is meant by saying that Herbart conceived of education as broadly social, rather than personal.
10. Show in what ways and to what extent Herbart:
 (*a*) Enlarged our conception of the educational process.
 (*b*) Improved the instruction content and process.
11. Explain why Herbartian ideas took so much more quickly in the United States than did Pestalozzianism.
12. State the essentials of the kindergarten idea, and the psychology behind it.
13. State the contribution of the kindergarten idea to education.
14. Show the connection between the sense impression ideas of Pestalozzi, the self-activity of Froebel, and the manual activities of the modern elementary school.
15. Explain why scientific studies came into the schools so slowly, up to about 1860, and so very rapidly after about that time.
16. Explain the particularly long resistance to the introduction of scientific studies by industrial England.
17. State the comparative importance of content and drill in education.
18. Does the reasoning of Herbert Spencer appeal to you as sound? If not, why not?
19. Show how the argument of Spencer for the study of science was also an argument for a more general diffusion of educational advantages.
20. Would schools have advanced in importance as they have done had the industrial revolution not taken place? Why?
21. Why is more extended education called for as "industrial life becomes more diversified, its parts narrower, and its processes more concealed"?
22. Point out the social significance of the educational work of John Dewey.
23. Point out the value, in the new order of society, of each group of school subjects listed in footnote 1 on page 763.
24. Contrast the virtues of a school before Pestalozzi's time and those of a modern school.

SELECTED READINGS

In the accompanying *Book of Readings* the following selections illustrative of the contents of this chapter are reproduced:

344. Bache: The German Seminaries for Teachers.

345. Bache: A German Teachers' Seminary Described.
346. Bache: A French Normal School Described.
347. Barnard: Beginnings of Teacher-Training in England.
348. Barnard: The Pupil-Teacher System Described.
349. Clinton: Recommendation for Teacher-Training Schools.
350. Massachusetts: Organizing the First Normal Schools.
 (*a*) The Organizing Law.
 (*b*) Admission and Instruction in.
 (*c*) Mann: Importance of the Normal School.
351. Early Textbooks: Examples of Instruction from
 (*a*) Davenport: History of the United States.
 (*b*) Morse: Elements of Geography — Map.
 (*c*) Morse Elements of Geography.
352. Murray: A Typical Teacher's Contract.
353. Bache: The Elementary Schools of Berlin in 1838.
354. Providence: Grading the Schools of.
355. Felkin: Herbart's Educational Ideas.
356. Felkin: Herbart's Educational Ideas Applied.
357. Titchener: Herbart and Modern Psychology.
358. Marenholtz-Bülow: Froebel's Educational Views.
359. Huxley: English and German Universities Contrasted.
360. Huxley: Mid-nineteenth-Century Elementary Education in England.
361. Huxley: Mid-nineteenth-Century Secondary Education in England.
362. Spencer: What Knowledge is of Most Worth?
363. Spencer: Conclusions as to the Importance of Science.
364. Dewey: The Old and New Psychology Contrasted.
365. Ping: Difficulties in Transforming the School.
 (*a*) Relating Education to Life.
 (*b*) The Old Teacher and the New System.
366. Dewey: Socialization of School Work illustrated by History.

QUESTIONS ON THE READINGS

1. Contrast the instruction in a German Teachers' Seminary (345) or a French normal school (346) of 1838, as described by Bache, with that of an American normal school of to-day.
2. What do the beginnings of teacher-training in England (347, 348) indicate as to conceptions then existing as to the educational process?
3. Show, by comparison, that the beginnings of the American normal school were German, rather than English in origin.
4. Just what educational conditions does Governor Clinton (349) indicate as existing in New York State, in 1827?
5. Contrast the instruction in the early Massachusetts normal schools (350) with that in the German (345) and French (346) of about the same time.
6. What do the three professional courses reproduced (345, 346, 350 b) indicate as to the development of pedagogical work by about 1840?
7. Compare the textbook types, given in 351, with modern textbooks in equivalent subjects.
8. Just what light on school teaching, in 1841, does the teacher's contract given (352) throw?
9. State the steps in the evolution of a graded system of schools (353, 354).
10. State the essentials of Herbart's educational ideas (355, 356), and the nature of the advances made over his predecessors.

learning that they might be prepared for participation in the functions of government.[1] This is well expressed in the quotations given (p. 525) from early American statesmen as to the need for the education of public opinion and the diffusion of knowledge among the people. The same ideas were expressed by French writers and statesmen of the time, and by the English after the passage of the Reform Bills of 1832 and 1867 (p. 642). With the gradual extension of the franchise to larger and larger numbers of the people, the extension of educational advantages naturally had to follow. The education of new citizens for "their political and civil duties as members of society and freemen" became a necessity, and closely followed each extension of the right to vote. In all democratic governments the growing complexity of modern political society has since greatly enlarged these early duties of the school. To-day, in modern nations where general manhood suffrage has come to be the rule, and still more so in nations which have added female suffrage as well, the continually increasing complexity of the political, economic, and social problems upon which the voters are expected to pass judgment is such that a more prolonged period of citizenship education is necessary if voters are to exercise, in any intelligent manner, their functions of citizenship. In nations where the initiative, referendum, and recall have been added, the need for special education along political, economic, and social lines has been still further emphasized.

At first instruction in the common-school branches, with instruction in morals or religion added, was regarded as sufficient. In States, such as the German, where religious instruction was retained in the schools, this has been made a powerful instrument in moulding the citizenship and upholding the established order. The history of the different nations has also been used by each as a means for instilling desired conceptions of citizenship, and some work in more or less formal civil government has usually been added. To-day all these means have been proven inadequate for democratic peoples. In consequence, the work in civil government is being changed and broadened into institutional and community civics; the work of the elementary school is being socialized, along the lines advocated by Dewey; and instruction in economic principles and in the functions of government is being

[1] For long the knowledge-conception dominated instruction, it being firmly believed by the advocates of schools that knowledge and virtue were somewhat synonymous terms.

introduced into the secondary schools. Instead of being made mere teaching institutions, engaged in promoting literacy and diffusing the rudiments of learning among the electorate, schools are to-day being called upon to grasp the significance of their political and social relationships, and to transform themselves into institutions for improving and advancing the welfare of the State (R. 368).

The promotion of nationality. In Prussia the promotion of national solidarity was early made an important aim of the school. This has in time become a common national purpose, as there has dawned upon statesmen generally the idea that a national spirit or culture is "an artificial product which transcends social, religious, and economic distinctions," and that it "could be manufactured by education" (R. 340). In consequence of this discovery the school has been raised to a new position of importance in the national life, and has become the chief means for developing in the citizenship that national unity and national strength so desirable under present-day world conditions. In the German States, where this function of the school has in recent times been perverted to carry forward mperialistic national ends (R. 342); in France, where it has been intelligently used to promote a rational type of national strength (R. 341); in Italy, where divergent racial types are being fused into a new national unity; in Cuba, Porto Rico, and the Philippines (R. 343) where the United States has used education to bring backward peoples up to a new level of culture, and to develop in them firm foundations of national solidarity; in China (R. 335) where an ancient people, speaking numerous dialects, is making the difficult transition from an old culture to the newer western civilization; and in Algiers and Morocco, where the spirit of French nationality is being fused into dark-skinned tribesmen — everywhere to-day, where public education has really taken hold on the national life, we find the school being used for the promotion of national solidarity and the inculcation of national ideals and national culture. To such an extent has this become true that practically all the pressing problems of the school to-day, in any land, find their ultimate explanation in terms of the new nineteenth-century conceptions of political nationality.

Since the development of world trade routes following long rail and steamship lines, along which people as well as raw materials and manufactured articles pass to and fro, the entrance of new and

diverse peoples into distant national groups has created a new problem of nationalization that before the early nineteenth century was largely unknown. Previous to the nineteenth century the problem was confined almost entirely to peoples conquered and annexed by the fortunes of war. To-day it is a voluntary migration of peoples, and a migration of such proportions and from such distant and unlike civilizations that the problem of assimilating the foreigner has become, particularly in the English-speaking nations and colonies, to which distant and unrelated peoples have turned in largest numbers,[1] a serious national problem. The migration of 32,102,671 persons to the United States, between 1820 and 1914, from all parts of the world, has been a movement of peoples compared with which the migrations of the Germanic tribes — Angles, Saxons, Jutes, Goths, Visigoths, Vandals, Suevi, Danes, Burgundians, Huns — into the old Roman Empire in the fourth and fifth centuries pale into insignificance. No such great movement of peoples was ever known before in history, and the assimilative power of the American nation has not been equal to the task. The World War revealed the extent of the failure to nationalize the foreigner who has been permitted to come, and brought the question of "Americanization" to the front as one of the most pressing problems connected with American national education. With the world in flux racially as it now is, the problem of the assimilation of non-native peoples is one which the schools of every nation which offers political and economic opportunity to other peoples must face. This has called for the organization of special classes in the schools, evening and adult instruction, community-center work, nationalization programs, compulsory attendance of children, state oversight of private and religious schools, and other forms of educational undertakings undreamed of in the days when the State first took over the schools from the Church the better to promote literacy and citizenship.

Effects of the Industrial Revolution. The effects of the great industrial and social changes which we have previously described are written large across the work of the school. As the civilization in the leading world nations has increased in complexity, and

[1] It is to democratic England and the United States, and to the English self-governing dominions, that the greatest flood of emigrants from less advanced civilizations have gone. South America has also experienced a large recent immigration, but this has been mainly of peoples from the Latin races, and hence easier of assimilation.

the ramifications of the social and industrial life have widened, the school has been called upon to broaden its work, and develop new types of instruction to increase its effectiveness. An education which was entirely satisfactory for the simpler form of social and industrial life of two generations ago has been seen to be utterly inadequate for the needs of the present and the future. It is the far-reaching change in social and industrial and home-life, brought about by the Industrial Revolution, which underlies most of the pressing problems in educational readjustment to-day. As the industrial life of nations has become more diversified, its parts narrower, and its processes more concealed, new and more extended training has been called for to prepare young people for the work of life; to reveal to them something of the intricacy and interdependence of modern political and industrial and social groups; and to point out to them the importance of each one's part in the national political and industrial organization. With the ever-increasing subdivision and specialization of labor, the danger from class subdivision has constantly increased, and more and more the school has been called upon to instill into all a political and social consciousness that will lead to unity amid increasing diversity, and to concerted action for the preservation and improvement of the national life.

More education than formerly has also been demanded to enable future citizens to meet intelligently national and personal problems, and with the widening of the suffrage and the spread of democratic ideas there has come a necessary widening of the educational ladder, so that more of the masses of the people may climb. Even in nations having the continental-European two-class school system, larger educational opportunities for the masses have had to be provided. This has come through the provision of middle schools, continuation schools, higher primary schools, and people's high schools,[1] as in Germany, France (see diagram, p. 598), the Scandinavian countries (p. 713; **R. 370**), and Japan (p. 720). In nations having an American-type educational ladder, it has led to the multiplication of secondary schools and secondary-school courses, that a larger and larger percentage of the people may be prepared better to meet the increasingly complex and increasingly difficult conditions of modern political, social, and industrial life. In the more advanced and more dem-

[1] See a good article on this development by I. L. Kandel, in the *Educational Review* for November, 1919, entitled "The Junior High School in European Systems."

ocratic nations we also note the establishment of systems of evening schools, adult instruction, university extension, science and art instruction in special centers, the multiplication of libraries, and the increasing use of the lecture, the stereopticon, and the public press, for the purpose of keeping the people informed. No nation has done more to extend the advantages of secondary education to its people than has the United States; France has been especially prominent in adult instruction; England has done noteworthy work with university extension and science and art instruction; while the United States has carried the library movement farther than any other land. All these, again, are extensions of educational opportunity to the masses of the people in a manner undreamed of a century ago.

University expansion. The modern university first attained its development in Prussia (pp. 553-55), while in England and in the nations which drew their inspiration from her, the teaching college, with its narrow range of studies and disciplinary instruction (**R.** 331), continued to dominate higher education until past the middle of the nineteenth century (**R.** 359). The old universities of France, aside from Paris, were virtually destroyed in the days of the Revolution, and their re-creation as effective teaching and research institutions has been a relatively recent (1896) event. The universities of Italy and Spain ceased to be effective teaching institutions centuries ago, and only recently have begun to give evidences of new life.

Within the past three quarters of a century, and in many nations within a much shorter period of time, the university has very generally experienced a new manifestation of popular favor, and is to-day looked upon as perhaps the most important part, viewed from the standpoint of the future welfare of the State, of the entire system of public instruction maintained by the State. In it the leaders for the State are trained; in it the thinking which is to dominate government a quarter-century later is largely done; out of it come the creative geniuses whose work, in dozens of fields of human endeavor, will mould the political, social, and scientific future of the nation (**R.** 369). Every government depending upon a two-class school system must of necessity draw its leaders in the professions, in government, in pure and applied science, and in many other lines from the small but carefully selected classes its universities train. In a democracy, depending entirely upon drawing its future leaders from among the mass,

the university becomes an indispensable institution for the training of leaders and for the promotion of the national welfare. In a democratic government one of the highest functions of a university is to educate leaders and to create the standards for democracy.

The university has, accordingly, in all lands, recently experienced a great expansion. The German universities have been prominent modern institutions for a century and a half. Realizing, as no other people have done, their value in developing skilled leaders for the State, promoting the national welfare, integrating the Empire, and as centers for building up among students of other nationalities a good-will toward Germany, large sums have been spent on their further development since 1871. Within the past quarter-century new and strong French universities have been created,[1] and old universities in Italy, Spain, Portugal, and Greece have been awakened to a new life. The English universities have been made over, since 1870, and new municipal universities in Sheffield, Bristol, Leeds, Manchester, Birmingham, Liverpool, and London have set new standards in English higher education. The universities of Scotland, Holland, Switzerland, and the Scandinavian countries have also recently attained to world prominence. In Australia, New Zealand, Japan, China, the Philippines, India, Egypt, Palestine, Algiers, and South Africa, new universities have been created to advance the national welfare. The South American nations have also established a number of promising new foundations, and given new life to older ones. Often nations swinging out into the current of western civilization have developed their universities before popular education really got under way.

In no country has the development of university instruction been more rapid than in the United States and Canada. New and important state universities are to-day found in most of the American States and Canadian Provinces, some States maintaining two. These have been relatively recent creations to serve democracy's needs, and upon the support of these state universities large and increasing sums of money are spent annually.[2] In

[1] Paris, for example, has become the greatest university in Europe, exceeding Berlin (1914) in students by approximately 25 per cent and in expenditures 40 per cent.

[2] "The rise of these great universities is the most epoch-making feature of our American civilization, and they are to become more and more the leaders and the makers of our civilization. They are of the people. When a state university has gained solid ground, it means that the people of a whole state have turned their

no nation of the world, too, has private benevolence created and endowed so many private universities of high rank as in the United States,[1] and these have fallen into their proper places as auxiliary agents for the promotion of the national welfare in government, science, art, and the learned professions.

From small collegiate institutions with a very limited curriculum, a century ago, stimulated in part by the German example and in part responding to new national needs, universities to-day, in all the leading world nations, have developed into groups of well-organized professional schools, ministering to the great number of special needs of modern life and government. The university development since the middle of the nineteenth century has been greater than at any period before in world history, and with the spread of democracy, dependent as democracy is upon mass education to obtain its leaders, the university has become "the soul of the State" (R. 369). The university development of the next half-century, the world as a whole considered, may possibly surpass anything that we have recently witnessed.

The state school systems as organized. We now find state school systems organized in all the leading world nations. In many the system of public instruction maintained is broad and extensive, beginning often with infant schools or kindergartens, continuing up through elementary schools, middle schools, continuation schools, secondary schools, and normal schools, and culminating in one or more state universities. In addition there are to-day, in many nations, state systems of scientific and technical schools and institutions, and vocational schools and schools for special classes, to which we shall refer more in detail a little further on. The support of all these systems of public instruction to-day comes largely from the direct or indirect taxation of the wealth of the State. Being now conceived of as essential to the welfare and progress of the State, the State yearly confiscates a portion of every man's property and uses it to maintain a service deemed vital to its purposes.

The sums spent to-day on education by modern States seem

faces toward the light; it means that the whole system of state schools has been welded into an effective agent for civilization. Those who direct the purposes of these great enterprises of democracy cannot be too often reminded that the highest function of a university is to furnish standards for a democracy." (Pritchett, Henry S., in *Atlantic Monthly*.)

[1] The gifts and bequests for colleges and universities in the United States, from 1871 to 1916, totaled $647,536,608, and by 1920 probably have reached $750,000,000.

enormous, compared with the sums spent for education under conditions existing a century ago. In England, for example, where the first national aid was granted, in 1833, in the form of a parliamentary grant of £20,000 (approximately $100,000), the parliamentary grants for elementary schools had reached approximately £12,000,000 by 1910, with an additional national aid for universities of over £1,100,000. The year following the World War the grants were £32,853,111. In France a treasury grant of 50,000 francs (approximately $10,000) was first made for primary schools, in 1816. This was doubled in 1829, and in 1831 was raised to a million francs. By 1850, the state aid for primary education had reached 3,000,000 francs; by 1870, 10,000,000 francs; by 1880, 30,000,000; and by 1914, approximately 220,000,000 francs. In addition the State was paying out 25,000,000 francs for secondary schools, and 10,000,000 francs for universities. In the United States the total expenditures for maintenance only of public elementary and secondary schools was $69,107,612, in 1870–71; had reached $214,964,618 by the end of the nineteenth century; and was $640,717,053 in 1915–16, with an additional $101,752,542 for universities. By 1920 the total expenditures for the maintenance of public elementary, secondary, and higher education in the United States will probably total a billion dollars. These rapidly increasing expenditures merely record the changing political conception as to the national importance of enlarging the educational opportunities and advantages of those who are to constitute and direct the future State.

II. SCIENTIFIC

In no phase of the remarkable educational development made by nations, since the middle of the nineteenth century, has there been a more important expansion of the educational service than in the creation of schools dealing with the applications of science to the affairs of the national life. Still more, no extension of instruction into new fields has ever yielded material benefits, increased productivity, alleviated suffering, or multiplied comforts and conveniences as has this new development in applied scientific education during the past three quarters of a century.

Science instruction in the schools. At first this new work came in, as we have seen (p. 774), but slowly, and its introduction into the secondary schools of France, Germany, England, the United States, and other nations for a time met with bitter opposi-

tion from the partisans of the older type of intellectual training. In Germany it was not until after Emperor William II came to the throne (1888) that the *Realschulen* really found a warm partisan, he demanding (1890), in the name of the national welfare, that the secondary schools "depart entirely from the basis that has existed for centuries — the old monastic education of the Middle Ages" — and that "young Germans and not young Greeks and Romans" be trained in the schools (**R. 368**). During his reign the *Realschulen* (six-year course) and *Oberrealschulen* (nine-year course) were especially favored, while permission to found additional *Gymnasien* became hard to obtain. The scientific course in the French *Lycées* similarly did not prosper until after the coming of the Third Republic (1871) and the rise of modern scientific and industrial demands. In England it was not until after 1870 that the endowed secondary schools began to include science instruction, and laboratory instruction in the sciences began to be introduced into the secondary schools of the United States at about the same time. In the United States, too, the first manual-training high school was not established until 1880, but by 1890 the creation of such schools was clearly under way. Other nations — Switzerland, Holland, the Scandinavian countries — also began to include laboratory science instruction in the work of their secondary schools at about the same time. The decade of the seventies witnessed a rising interest in instruction in science which carried such work into the secondary schools of all progressive nations. To-day, in nearly all lands, we find secondary-school courses in science, or special secondary schools for scientific instruction, occupying a position of at least equal importance with the older classical courses or schools. As science instruction has become organized, and a knowledge of the principles of science has become diffused, object lessons, *Realien*, nature study, or elementary science instruction has very generally been put into the elementary or people's schools for the younger pupils. As a result, young people finishing the elementary schools to-day know more relating to the laws of the universe, and the applications of these laws to human life and industry, than did distinguished scholars two centuries ago.

All this work in the elementary schools, middle schools, people's high schools, secondary schools, or special technical schools of middle or secondary grade has been of much value in diffusing scientific [illegible] of thinking and work-

ing among large numbers of people, as well as in revealing to many the possibilities of a scientific career. The great and important development of scientific instruction, however, since about 1860, has been in the fields of advanced applied science or technical education, and has taken place chiefly in new and higher specialized schools and research foundations. The fields in which the greatest scientific advances have been made, and to which we shall here briefly refer, have been engineering, agriculture, and medicine.

The beginnings of technical education. The beginnings of technical education were made earliest in France, Germany, and the United States, and in the order named. France and German lands, but particularly France, inherited through the monasteries what survived of the old Roman skills and technical arts. In the building of bridges, roads, fortifications, aqueducts, and imposing public buildings, the Romans had shown the possession of engineering ability of a high order. Some of this knowledge was retained by the monks of the early Middle Ages, as is evidenced by the monasteries they erected and the churches they built. Later it passed to others, and is evidenced in the great cathedrals and town halls of Europe, and particularly of northern France.

In military and civil engineering the French were also the true successors of the Romans. As early as 1747 a special engineering school for bridges and highways (*École des Ponts et Chaussées*) had been created, and a little later a special school to train mining engineers (*École des Mines*) was added. These were the first of the world's higher technical schools. After the Revolution, the new need for military and medical knowledge, as well as the general French interest in applied science, led to the creation of a large number of important higher technical institutions (list, p. 518), most of which have persisted to the present and been enlarged and extended with time. Napoleon also created a School of Arts and Trades (R. 282), and a number of military schools (p. 590).

In German lands there was early founded a series of trade schools,[1] which have in time been developed into important technical universities. After the creation of the Imperial German Empire, in 1871, these schools were especially favored by the

[1] The oldest was Charlottenburg (1799), Darmstadt (1822), Carlsruhe (1825), Munich (1827), Dresden (1828), Nuremberg (1829), Stuttgart (1829), Cassel (1830), Hanover (1831), Augsburg (1833), and Brunswick (1835). A similar school, which later developed into a technical university, was founded at Prague, in Bohemia, in 1806.

government, and their work was raised to a rank equal to that of the older universities. To the excellent training given in these institutions the German leadership in applied science and industry, before 1914, was largely due.[1] It has been the particular function of these technical universities to apply scientific knowledge to the industries and the arts, and to show the technical schools beneath and the directors of German industries how further to apply it (R. 371). Of their work a recent *Report*[2] well says:

> While in other countries the development of science has been academic, in Germany every new principle elaborated by science has revolutionized some industry, modified some manufacturing process, or opened up an entirely new field of commercial exploitation. In the chemical industries of Germany . . . there is one trained university chemist for every forty working-people. It is important to realize that the development of Germany's manufactures and commerce has depended not upon the establishment of any monopoly in the domain of science, not upon any special advancement of science within her own boundaries, but primarily upon the practical utilization of the results of scientific research in Germany and other countries.

The creation of the United States Military Academy, at West Point, in 1802, marks the American beginnings in technical education. In 1824 the Rensselaer Polytechnic Institute was begun, largely as a manual-labor school after the Fellenberg plan, to give instruction "in the applications of science to the common purposes of life," and about 1850 this developed into one of the earliest of our four-year engineering colleges. In 1846 the United States organized a college for naval engineering, at Annapolis, to do for the Navy what West Point had done for the Army. In 1861 the Massachusetts Institute of Technology was founded, opening its doors in 1865. This was the first of a number of important new engineering colleges, and eight others had been established, by private funds, before 1880.

The development in England came a little later. Good engineering schools have since been developed in connection with

[1] The German technical training "produces an engineer who is not only older in years, but also more mature in experience and in judgment than the average graduate of an engineering college in America. Whether or not it would be wise to adopt — so far as that would be possible — German methods in the schools and colleges of the United States, it must nevertheless be recognized that those methods have given Germany a leadership in applied science and in industry which she will keep, unless the educational authorities of other nations find some way of producing men of like calibre." (Munroe, James P., "Technical Education"; in Monroe's *Cyclopedia of Education*.)

[2] *Report of Commission on National Aid to Vocational Education*, Washington, 1914, p. 90.

the new municipal universities, while good engineering colleges have also been created at Oxford and Cambridge, as well as at the Scottish and Irish universities.

The new impulses to development. During the first six decades of the nineteenth century, France, the German States, and the United States were slowly moving toward the creation of special schools for technical education. After about 1860 the movement increased with great rapidity. A number of events contributed to this change in rate of development, the most important of which were:

1. The development attained by pure science, by about 1860. (See chapter XXVII, part II, p. 723.)
2. The Industrial Revolution (p. 728), which changed nations from an agricultural to an industrial status, opened up the possibilities of vast world trade, and created enormous demands for technically trained men to supervise and develop the rapidly growing industries of nations.
3. The London Exhibition of 1851, which displayed to the world the applications of science to trade, manufacturing, and the arts, made in particular by England. This opened the eyes of Europe and America to the possibilities of technical education, and led to the creation, in 1853, of a national Department of Science and Art (p. 638) for England. This began the stimulation, by money grants, of technical education and instruction in drawing, and exerted from the first an important influence on English education.
4. The passage by the Congress of the United States of the Morrill Land-Grant-College Act, in 1862, which provided for the creation of colleges of engineering, military science, and agriculture, in each of the American States.
5. The militarily successful wars of Prussia against Denmark, in 1864; Austria, 1866; and France, 1870–71. These revealed to other nations the importance of sound military and engineering education for a nation, and so tremendously stimulated German technical education that the new nation soon arose, in many lines, to a position of world industrial leadership (369).
6. The Centennial Exposition at Philadelphia, in 1876, which repeated the work of the London Exhibition of 1851, and gave a new meaning to the scientific and engineering education then developing in the new American Land-Grant Colleges.
7. The work of Virchow in Germany (1856) in developing pathology; of Pasteur in France, after 1859, in establishing the germ theory of disease; the English surgeon Lister, about the same time, in developing antiseptic surgery; and the new work of physiologists and chemists. Combined these have remade medical science, and have opened up immense possibilities for benefiting mankind.

Following these important stimuli to activity, the important nations of the world began the earnest development of technical education, and later medical education, with the result that this new development has affected educational practice all over the world. The new ideas have spread to all continents, and to-day the call for technical education comes not only from the older nations and such new countries as Canada, Australia, South Africa, and the South American States, but from such ancient and backward civilizations as Japan, China, Siam, the Philippines, the East Indies, Egypt, Persia, and Turkey.

In consequence to-day numerous and expensive engineering colleges and research institutions are maintained by the important world nations. To-day the trained engineer goes to work his wonders in all corners of the globe, and his task has become primarily that of organizing and directing men in the work of controlling the forces and materials of nature so that they may be made to benefit the human race. So rapid has been the development that, out of the earlier comprehensive type of engineering, to day dozens of specialized types of engineering education and specialization have been evolved, covering such related fields as civil, mechanical, mining, metallurgical, electrical, architectural, chemical, electro-chemical, marine, naval, sanitary, biological, and public-health engineering. No longer can a nation hope to develop its resources, care properly for the modern needs of its people, or be counted among the important industrial or agricultural nations if it neglects the development of technical education.

Science applied to agriculture. France also was the direct inheritor, through the monks, of the old Roman agricultural knowledge and skills, though up to the nineteenth century no attempt to organize agricultural instruction took place anywhere in Europe. The earliest effort in that direction was a proposal made in 1775 by Abbé Rosier, in France, to Turgot, then Minister of Finance, on "A Plan for a National School of Agriculture." Nothing coming of the proposal, the Abbé submitted the proposal to the National Assembly, in 1789, and the same idea was later presented to Napoleon, but without results. The first person to give practical form to the idea was Fellenberg (p. 546), who conducted his manual-labor agricultural institute at Hofwyl, from 1806 to 1844, and inaugurated a plan of educational procedure which was soon afterwards copied in Switzerland, France, the South German

States, England, and the United States. One of the earliest institutions to be established outside of Switzerland was the Institute of Agriculture and Forestry, founded by the Agricultural Society of Würtemberg, in 1817, at Hohenheim, near Stuttgart.

The earliest schools to teach agriculture in France were the Royal Agronomic Institution at Grignon (1827); the Institute at Coetbo (1830), and the Agricultural School at San Juan (1833). By 1847 twenty-five agricultural schools were in operation in France, to several of which orphan asylums and penal colonies were attached. In 1848 the French Government reorganized the instruction in agriculture and gave it a national basis. It ordered the creation of a farm school in each department of France; a number of higher schools for agricultural instruction at central places; and a National Agronomic Institute for more advanced instruction. A treasury grant of 2,500,000 francs to establish the system was voted. In 1873 elementary instruction in agriculture was ordered given in all village and rural elementary schools.

In the United States a number of agricultural societies were formed early in the century, and a private school of agriculture was opened in Maine, in 1821, and another in Connecticut, in 1824. With the opening-up of the new West to farming and the change of the East to manufacturing, after about 1825, the agitation for agricultural education for a time died out, reappearing in Michigan, in 1850. In that year a new constitution was adopted which required the legislature to create a State School of Agriculture, and in 1857 the Michigan Agricultural College opened its doors. Two years later a "Farmers' High School," which later became the Pennsylvania State College, was opened in central Pennsylvania. In 1862, in the midst of the greatest civil war in history, the American Congress passed the very important Morrill Act, which provided for the creation of a college to teach agriculture, mechanic arts, and military science in each of the American States. It was a decade before many of these institutions opened, and for a time they amounted to but little. They had but few students, little money, and the instruction was very elementary and but poorly organized. Cornell University, in New York State, was one of the first (1868) of the new institutions to get under way and find its work. The Centennial Exposition (1876) gave the needed emphasis to the engineering courses, and by 1880 these were well established. The agricultural courses did not flourish for two decades longer, and the military science not

until the World War. Despite feeble beginnings, the result of the aid given by the national government has in time proved very valuable, and to-day very large sums of money are being appropriated by the American States and Territories for instruction in engineering, agriculture, home economics, and related sciences, and large numbers of students are now enrolled for this technical training.

The recent new interest in agricultural education. Since the latter part of the nineteenth century agricultural education has awakened new interest in many lands. The German States have created many schools for instruction in agriculture and forestry. Denmark has regenerated the rural life of the nation (R. 370) by its "People's High Schools" and its special schools for instruction in agriculture. Italy has recently made special efforts to extend agricultural instruction to its people. Canada, Australia, and New Zealand have established agricultural schools. In Algiers, Morocco, Japan, China, the Philippines, and India, good beginnings in agricultural education have been made.

As agricultural knowledge has been worked out and classified, and agricultural instruction has become organized, it has become possible to relegate some of the more elementary instruction to the school below. This was done in European nations before it took place in the United States. In 1888 the first American agricultural high school was established in Minnesota. By 1898 there were ten such schools in the United States, but since 1900 the development has been very rapid. By 1920 probably a thousand high schools were offering instruction in agriculture, while elementary instruction in agriculture had been introduced into the rural and village schools of practically every American agricultural State.

The agricultural schools, colleges, and experimental stations established by the national, state, and local educational authorities of different nations have added another new division to the work of public education, and one which is both very costly and very remunerative. Out of the work of these schools has come a vast quantity of useful knowledge, and hundreds of important applications of science to farm and home life. Old breeds in stock and grains have been improved, new breeds have been derived, and productivity has been greatly increased. Through the teachings of home economics the farmer's home is being transformed, while the applications of science made in these schools

are modifying almost every phase of agricultural life and rural living.

Medicine and sanitary science. Closely related to sanitary, biological, and public-health engineering has been the enormous recent development of medicine and surgery. Within half a century instruction in these subjects has been entirely transformed, and large and costly laboratories and hospitals are now required for the work. There has also been much specialization in medical training, within recent years, and especially has preventive medicine been developed. Extending the newly found biological and medical knowledge to the animal and vegetable worlds has resulted in a similar development of veterinary medicine [1] and plant pathology. A combination of medical knowledge with engineering and chemistry has produced the sanitary engineer, while medical knowledge and applied biology has produced the public-health expert.[2]

So important, too, has the control of all kinds of disease become, now that people, animals, insects, plants, and goods move so freely along the great trade routes of the world, that nations everywhere feel the necessity, now that scientific research has revealed to questioning man the methods of transmission of the diseases which once decimated armies and cities, destroyed stocks, and ruined harvests, of developing ample quarantine service and medical staffs to cope with diseases — human, animal, and plant — from without, and to control those which arise within. Nations too poor as yet to provide such service for themselves are today having such provision made for them by other nations, or by great national foundations,[3] so that other lands may be protected from the ravages of their diseases and the economic wealth of all

[1] The first veterinary school in the world was established at Lyons, France, in 1762; the second at Alfort, a suburb of Paris, in 1766; the third at Berlin, in 1792; and the fourth at London, in 1793.

[2] The development of scientific training for nursing, begun by the Germans near the end of their wars with Napoleon, is another example of the creation of a new profession through the application of science. This was carried to new levels by Miss Florence Nightingale, who began work in London, in 1860, after her experiences in the Crimean War of 1854–56, and has been greatly improved since 1870 as a result of the new medical knowledge and methods which have come in since that time. The provision of training for nurses, and the certification of doctors and nurses for practice, are other new developments in the field of state education. Similarly is the training and certification of dentists, veterinarians, and pharmacists, all of which are nineteenth-century additions.

[3] The work of the Rockefeller Foundation, an American Foundation organized to promote "the well-being of mankind throughout the world," in spending millions to provide China with a modern system of western medical education and hospital service, is perhaps the greatest example of a scientifically organized service ever rendered by the people of one nation to those of another.

may be increased. The element of Christian charity has also entered into the service, the labors of Dr. Grenfell in Labrador, and the work of the Rockefeller medical and surgical boat traveling

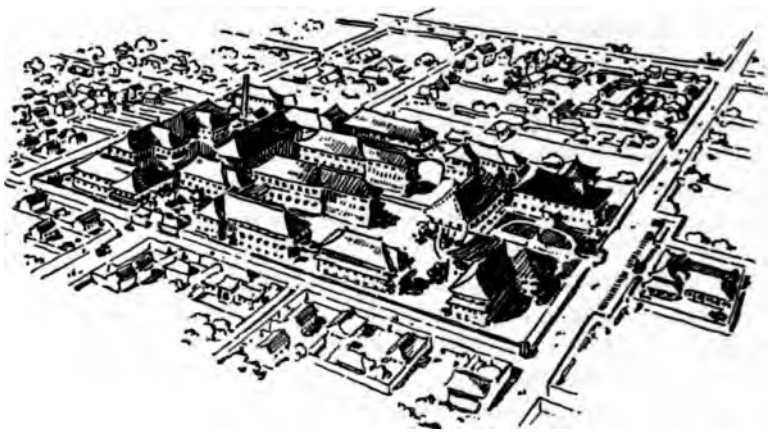


FIG. 232. THE PEKING UNION MEDICAL COLLEGE

A well-equipped center for instruction in western medicine, endowed by the Rockefeller Foundation. A similar school is being created at Shanghai, in central China. Existing medical schools at two other points, and nineteen hospitals scattered over the Republic, have also been aided by this American foundation. In addition, many medical missionaries, Chinese physicians, and nurses have been sent to the United States for study. To improve health standards and living conditions throughout the world is the purpose of the work of the Foundation, which now has work under way on every continent.

among the Philippine Islands and its hookworm work on every continent, being good examples of such Christian effort.

Applied science the nation's protector. To-day applied science stands everywhere as the nation's protector. Applied in sanitation and preventive medicine it has reduced the death rate, prolonged life, and protects homes from many hidden dangers. In the engineering fields it has transformed the face of the earth and all our ways of living and doing business. Applied to industry it builds factories and railways, and works out new processes to eliminate wastes, improve production, and utilize by-products. Thousands of labor-saving inventions owe their origin to a new truth worked out in some laboratory, and applied in another. Applied chemistry has wrought wonders in advancing industry, protecting the public welfare, eliminating unnecessary labor, and making life richer for all.

To-day the engineer with his railway and irrigating dam and

power plant in the desert has replaced the monk as the vanguard of the forces of civilization. The scientist in his laboratory in part replaces armies and navies as the protector of the nation's safety. The scientifically trained Red Cross nurse is fast replacing the unskilled devotion of the older Sister of Charity. The doctor and the surgeon at the medical mission are carrying a very practical type of Christian civilization into far-away lands. The laboratory expert in the quarantine station has succeeded the priest with bell and book in keeping pestilence away from the land. The public-health officer in the little town, and the sanitary engineer in the city, protect the health and happiness of millions of homes. The plant pathologist and veterinarian guard the crops and herds from which food and clothing are derived. The scientific experts in plant and animal industries work steadily to improve breeds and increase yields. When one compares present-day scientific knowledge with that represented in the thirteenth-century Encyclopædia of Bartholomew Anglicus (**R. 77**); our modern knowledge of diseases with the theories as to disease advanced by Hippocrates (p. 197), and taught for so many centuries in Christian Europe; our modern knowledge of bacterial transmission with the mediæval theories of Divine wrath and diabolic action; our modern ability to annihilate time and space compared with early nineteenth-century conditions; or modern applied science with the very limited technical knowledge possessed by the guilds of the later Middle Ages — thc stories of Aladdin and his wonderful lamp seem to have been even more than realized in our practical everyday life.

Engineering, agriculture, and modern medicine stand as three of the great applications of modern science to human affairs, and as three of the most important and costly additions to state educational effort made since the time when nations began to accept the political philosophy of the eighteenth-century reformers and to take over the school from the Church, because by so doing the interests of the State could better be advanced thereby.

III. VOCATIONAL

What is vocational education? In a certain sense, all education is vocational, in that it aims to prepare one for some vocation in life. In Greece and Rome education was vocational, in that it prepared one to be a citizen in the State. During the Middle Ages education was to prepare for a vocation in the Church

Later the vocation of a scholar appeared, and still later that of a gentleman. In modern times a large range of state services have been opened up as vocations. Since the beginning of the nineteenth century, with the extension of educational advantages to increasing numbers of the people, preparation for more intelligent living and citizenship have come to be new motives in education.

To-day we no longer use the term vocational education in this rather general sense, but restrict its use to the specific training of individuals for some useful employment. Training for law, medicine, the ministry, teaching, engineering, scientific agriculture, nursing, and commerce are examples of vocational education in its higher ranges. The development of education along these lines has previously been described. In this division of this chapter we shall use the term in a still more common and still more restricted sense, as meaning the training of the younger people of a State to do well certain specific things, by teaching them processes and the practical applications of knowledge, chiefly science and art, to the work of the vocation they expect to follow to earn their living. The *Report* of the American *Commission on National Aid to Vocational Education* (1914) defined vocational education (p. 16) as follows:

> Wherever the term "vocational education" is used in this *Report*, it will mean, unless otherwise explained, that form of education whose controlling purpose is to give training of a secondary grade to persons over fourteen years of age, for increased efficiency in useful employment in the trades and industries, in agriculture, in commerce and commercial pursuits, and in callings based upon a knowledge of home economics. The occupations included under these are almost endless in number and variety.

The need for vocational education. Used in this sense vocational education is an application of technical knowledge, worked out in the higher schools, to the ordinary vocations of a modern industrial world. As such it is a product of the Industrial Revolution and the breakdown of the age-old system of apprenticeship training,[1] and represents another of the important recent exten-

[1] "Large-scale production, extreme division of labor, and the all-conquering march of the machine, have practically driven out the apprenticeship system through which, in a simpler age, young helpers were taught, not simply the technique of some single process, but the 'arts and mysteries of a craft' as well. The journeyman and the artisan have given way to an army of machine workers, performing over and over one small process at one machine, turning out one small part of the finished article, and knowing nothing about the business beyond their narrow and limited task." (*Report of the Commission on National Aid to Vocational Education*, vol. I, pp. 19–20.)

sions of educational advantages to the masses of the people who labor with their hands to earn their daily bread.

Besides further democratizing education by extending its advantages to those who work in the shop and the office and on the farm, vocational education tends to correct many of the evils of modern industrial life. It puts the worker in possession of a great body of scientific knowledge relating to his work which shops and offices cannot give, and it keeps him, for several years after he becomes a wage earner and at a very impressionable period of his life, under the directing care of the school. It thus tends "to counteract the specialization and routine of the workshop, which wears out his body before nature has completed its development in form and power, blunts the intelligence which the school had tried to awaken, shrivels up his heart and imagination, and destroys his spirit of work."

Vocational education in Europe and the United States. For almost half a century the leading nations of western Europe, in an effort to readjust their age-old apprenticeship system of training to modern conditions of manufacture, and to develop new national prestige and strength, have given careful attention to the education of such of their children as were destined for the vocations of the industrial world. Germany, Austria, Switzerland, and France have been leaders, with Germany most prominent of all.[1] No small part of the great progress made by that country in securing world-wide trade,[2] before the World War, was due to the extensive and thorough system of vocational education worked out for German youths (R. 371). In commercial education, too, the Germans, up to 1914, led the world. Even more, they were the only great national group which had done much to develop commercial training. Next to Germany probably came the United States. The marked economic progress of Switzerland during the past quarter-century has likewise been due in large part to that type of education which would enable her, by skillful

[1] "In no country will you find the problem taken up in so thorough a manner; in no country will you find an attempt made to cover, by means of industrial schools, the occupations of everyone, from the lowly laborer to the director of the great manufacturing establishment. The State provided industrial training for every person who will be better off with it than without it. No occupation is too humble to receive the attention of the German authorities; and the opinion prevails there that science and art have a place in every occupation known to man." (Cooley, E. G., in *Report to the Commercial Club of Chicago*, 1912.)

[2] For example, the foreign trade of Germany, in 1880, was $31 per capita of the total population, and that of the United States was $32. Thirty years later, in 1910, Germany's foreign trade had increased to $62 per capita, and that of the United States to only $37.

artisanship, to make the most of her very limited resources. France has profited greatly, during the past half-century also, from vocational education along the lines of agriculture and industrial art. In Denmark, agricultural education has remade the nation (R. 370), since the days of its humiliation and spoliation at the hands of Prussia. England, though keenly sensitive to German trade competition, made only very moderate efforts in the direction of vocational education until Germany plunged the world in war in an effort more quickly to dominate commercially. Now, in the Fisher Education Act of 1918 (p. 649), England has at last laid foundations for a great national system of vocational education. Japan, also, recently laid large plans for a national system of vocational training.

In the United States but little attention was given to educating young people for the vocations of life until about 1905–10, though modern manufacturing conditions had before this largely destroyed the old apprenticeship type of training. Endowed with enormous natural resources; not being pressed for the means of subsistence by a rapidly expanding population on a limited land area; able to draw on Europe for both cheap manual labor and technically educated workers; largely isolated and self-sufficient as a nation; lacking a merchant marine; not being thrown into severe competition for international trade; and able to sell its products[1] to nations anxious to buy them and willing to come for them in their own ships; the people of the United States did not, up to recently, feel any particular need for anything other than a good common-school education or a general high-school education for their workers. The commercial course in the high school, the manual-training schools and courses, and



FIG. 233. THE DESTRUCTION OF THE TRADES IN MODERN INDUSTRY

Under the old conditions of apprenticeship a boy learned all the processes and became a tailor. To-day, in a thoroughly organized clothing factory, thirty-nine different persons perform different specialized operations in the manufacture of a coat.

[1] Chiefly raw products — a prodigal waste of natural resources. What every nation should do is to work up its raw products at home, and sell finished goods rather than raw products — "sell brains, rather than materials." (R. 370.)

some instruction in drawing and creative art were felt to be about all that it was necessary to provide.

The National Commission on Vocational Education. Largely since 1910, due in part to expanding world commerce and increasing competition in world trade; in part to a national realization that the battles of the future are to be largely commercial battles; and in part to the dawning upon the American people of the conception, first thought out and put into practice by Imperial Germany (R. 371), that that nation will triumph in foreign trade, with all that such triumph means to-day in terms of the happiness and welfare of its citizenship (R. 372), which puts the greatest amount of skill and brains into what it produces and sells.

After a number of sporadic efforts in different parts of the country,[1] and the introduction of a number of bills into Congress which failed to secure passage, the favorite English plan was followed and a Presidential Commission was appointed (1913) to inquire into the matter, and to report on the desirability and feasibility of some form of national aid to stimulate the development of vocational education. The Commission made its report in 1914, and submitted a plan for gradually increasing national aid to the States to assist them in developing and maintaining what will virtually become a national system of agricultural, trade, commercial, and home-economics education.

The Commission's findings. The Commission found that there were, in 1910, in round numbers, 12,500,000 persons engaged in agriculture in the United States, of whom not over one per cent had had any adequate preparation for farming; and that there were 14,250,000 persons engaged in manufacturing and mechanical pursuits, not one per cent of whom had had any opportunity for adequate training.[2] In the whole United States there were fewer trade schools, of all kinds, than existed in the little German kingdom of Bavaria, a State about the size of South Carolina; while the one Bavarian city of Munich, a city about the

[1] The first trade school in the United States was established privately, in New York City, in 1881. By 1900 some half-dozen had been similarly established in different parts of the country. In 1902 a trade school for girls was founded in New York City, which did pioneer work. In 1906 Massachusetts created a State Commission on Industrial Education, and later provided for the creation of industrial schools. In 1907 Wisconsin enacted the first trade-school law, and New York State followed in 1909.

[2] Germany before 1914 formed an interesting contrast to such conditions. There few untrained youths were to be found, and the nation, before 1914, was rapidly moving toward universal vocational education.

size of Pittsburgh, had more trade schools than were to be found in all the larger cities of the United States, put together. The Commission further found that there were 25,000,000 persons in

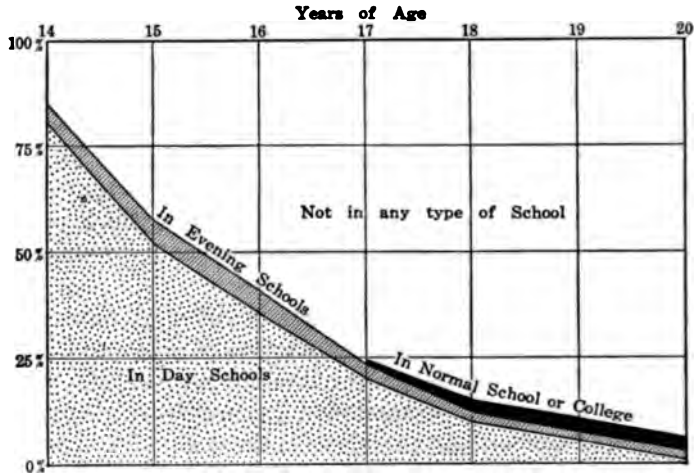


FIG. 234. SCHOOL ATTENDANCE OF AMERICAN CHILDREN, FOURTEEN TO TWENTY YEARS OF AGE

Based on an estimate made by the United States Bureau of Education in 1907 (Bulletin No. 1, p. 29), and based on conditions then existing, but probably still approximately true. In evening schools all classes were counted — public, private, Y.M.C.A., Y.W.C.A., etc. Public and private day schools, both elementary and secondary, also were counted.

the nation, eighteen years of age or over, engaged in farming, mining, manufacturing, and mechanical pursuits, and in trade and transportation, and of these the *Report* said:

If we assume that a system of vocational education, pursued through the years of the past, would have increased the wage-earning capacity of each of these persons to the extent of only ten cents a day, this would have made an increase of wages for the group of $2,500,000 a day, or $750,000,000 a year, with all that this would mean to the wealth and life of the nation.

This is a very moderate estimate, and the facts would probably show a difference between the earning power of the vocationally trained and the vocationally untrained of at least twenty-five cents a day. This would indicate a waste of wages, through lack of training, amounting to $6,250,000 every day, or $1,875,000,000 for the year.

The Commission estimated that a million new young people were required annually by our industries, and that it would need three years of vocational education, beyond the elementary-school

age, to prepare them for efficient service. This would require that three million young people of elementary-school age be continually enrolled in schools offering some form of vocational training. This was approximately three times the number of young people then enrolled in all public and private high schools in the United States, and following any kind of a course of study. In addition, the untrained adult workers then in farming and industry also needed some form of adult or extension education to enable them to do more effective work. The Commission further pointed out that there were in the United States, in 1910, 7,220,298 young people between the ages of fourteen and eighteen years, only 1,032,461 of whom were enrolled in a high school of any type, public or private, day or evening (Fig. 234), and few of those enrolled were pursuing studies of a technical type.

American beginnings; meaning of the work. In 1917 the American Congress made the beginnings of what is destined to develop rapidly into a truly national system of vocational education for the boys and girls of secondary-school age in the United States. This new addition to the systems of public instruction now provided is one which in time will bring returns out of all proportion to its costs. Without it the national prosperity and happiness would be at stake, and the position the United States has attained in the markets of the world could not possibly be maintained (**R. 372**).

This new American legislation is based on the best continental European experience, and is somewhat typical of recent national legislation for similar objects elsewhere. It is to include vocational training for agriculture, the trades and industries, commerce, and home economics.[1] A certain portion of the money appropriated annually by the national government is to be used for making or coöperating in studies and investigations as to needs and courses in agriculture, home economics, trades, industries, and commerce. The courses must be given in the public

[1] As illustrative of the general character of the vocations to be trained for, a few of the more common ones may be mentioned:

In agriculture: The work of general farming, orcharding, dairying, poultry-raising, truck gardening, horticulture, bee culture, and stock-raising.

In the trades and industries: The work of the carpenter, mason, baker, stonecutter, electrician, plumber, machinist, toolmaker, engineer, miner, painter, typesetter, linotype operator, shoecutter and laster, tailor, garment maker, straw-hat maker, weaver, and glove maker.

In commerce and commercial pursuits: The work of the bookkeeper, clerk, stenographer, typist, auditor, and accountant.

In home economics: The work of the dietitian, cook and housemaid, institution manager, and household decorator.

schools; must be for those over fourteen years of age and of less than college grade; and must be primarily intended for those who are preparing to enter or who have entered (part-time classes) a trade or a useful industrial pursuit.

As nation after nation becomes industrialized, as all except the smallest and poorest nations are bound to become in time, vocational education for its workers in the field, shop, and office will be found to be another state necessity. Only the State can adequately provide this, for only the State can finance or properly organize and integrate the work of so large and so important an undertaking. Though costly, this new extension of state educational effort will be found to be a wise business investment for every industrial and commercial nation. Considered nationally, the workers of any nation not provided with vocational education will find themselves unable to compete with the workers of other nations which do provide such specialized training.

IV. SOCIOLOGICAL

A new estimate as to the value of child life. As we saw in chapter XVIII, which described the opportunities for and the kind of schooling developed up to the middle of the eighteenth century, but little of what may be called formal education had been provided up to then for the great mass of children, even in the most progressive nations. We also noted the extreme brutality of the school. Such was the history of childhood, so far as it may be said to have had a history at all, up to the rise of the great humanitarian movement early in the nineteenth century.[1] Neglect, abuse, mutilation, excessive labor, heavy punishments, and often virtual slavery awaited children everywhere up to recent times. The sufferings of childhood at home were added to by others in the school (p. 455) for such as frequented these institutions.

After the coming of mills and manufacturing the lot of children became, for a time, worse than before. The demand for cheap labor led to the apprenticing of children to the factories to tend machines, instead of to a master to learn a trade, and there they

[1] "The snail's pace at which the race has moved toward humanitarianism is indicated by Payne's estimate (p. 6) that the race is perhaps two hundred and forty thousand years old, civilized man a few hundred years old, and a humanitarianism large enough to have any real concern in any organized fashion for the protection of children scarcely fifty years old. The fact that organizations in great number, laws, penalties, and constant vigilance are still everywhere needed to secure for children their inherent rights is evidence enough that we have still a long way to go before we reach the golden age." (Waddel, C. W., *An Introduction to Child Psychology*, p. 5.)

became virtual slaves and their treatment was most inhuman.[1] Conditions were worse in England than elsewhere, not because the English were more brutal than the French or the Germans, but because the Industrial Revolution began earlier in England and before the rise of humanitarian influences. England was a manufacturing nation decades before France, and longer still before Germany. By the time Germany had changed from an agricultural to a manufacturing nation (after 1871), the new humanitarianism and new economic conditions had placed a new value on child life and child welfare.

Since about 1850 an entirely new estimate has come to be placed on the importance of national attention to child welfare, though the beginnings of the change date back much earlier. As we have seen (p. 325), England early began to care for the children of its poor. In the Poor-Relief and Apprenticeship Law of 1601 (**R. 174**) England organized into law the growing practice of a century (p. 326) and laid the basis for much future work of importance. In this legislation, as we have seen, the foundations of the Massachusetts school law of 1642 were laid. In the Virginia laws of 1643 and 1646 (**R. 200 a**) and the Massachusetts law of 1660, providing for the apprenticeship of orphans and homeless children, the beginnings of child-welfare work in the American Colonies were made.

Many of the Catholic religious orders in Europe had for long cared for and brought up poor and neglected children, and in 1729 the first private orphanage in the new world was established by the Ursulines (p. 346) in New Orleans. The first public orphanage in America was established in Charleston, South Carolina, in 1790; the first in England at Birmingham, in 1817; and in 1824 the New York House of Refuge was founded. The latter was the forerunner of the juvenile reformatory institutions established later by practically all of the American States. These have developed chiefly since 1850. To-day most of the American States and governments in many other lands also provide state homes

[1] "As late as 1840 children of ten to fifteen years of age and younger were driven by merciless overseers for ten, twelve, sixteen, even twenty hours a day in the lace mills. Fed the coarsest food, in ways more disgusting than those of the boarding schools described by Dickens, they slept, when they had opportunity, often in relays, in beds that were constantly occupied. They lived and toiled, day and night, in the din and noise, filth and stench, of the factory that coined their life's blood into gold for their exploiters. Sometimes with chains about their ankles, to prevent their attempts to escape, they labored until epidemics, disease, or premature death brought welcome relief from a slavery that was forbidden by law for negro slaves in the colonies." (Payne, G. H., *The Child in Human Progress.*)

for orphan and neglected children, where they are clothed, fed, cared for, educated, and trained for some useful employment.

Child-labor legislation. One of the best evidences of the new nineteenth-century humanitarianism is to be found in the large amount of child-labor legislation which arose, largely after 1850, and which has been particularly prominent since 1900.

Under the earlier agricultural conditions and the restricted demand for education for ordinary life needs, child labor was not especially harmful, as most of it was out of doors and under reasonably good health conditions. With the coming of the factory system, the rise of cities and the city congestion of population, and other evils connected with the Industrial Revolution, the whole situation was changed. Humanitarians now began to demand legislation to restrict the evils that had arisen. This demand arose earliest in England, and resulted in the earliest legislation there.

The year 1802 is important in the history of child-welfare work for the enactment, by the English Parliament, of the first law to regulate the employment of children in factories. This was known as the Health and Morals of Apprentices Act (R. 373). This Act, though largely ineffectual at the time, ordered important reforms which aroused public opinion and which later bore important fruit. By it the employment of work-house orphans was limited; it forbade the labor of children under twelve, for more than twelve hours a day; provided that night labor of children should be discontinued, after 1804; ordered that the children so employed must be taught reading and writing and ciphering, be instructed in religion one hour a week, be taken to church every Sunday, and be given one new suit of clothes a year; ordered separate sleeping apartments for the two sexes, and not over two children to a bed; and provided for the registration and inspection of factories. This law represents the beginnings of modern child-labor legislation. It was 1843 before any further child-labor legislation of importance was enacted, and 1878 before a comprehensive child-labor bill was finally passed. In the United States the first laws regulating the employment of children and providing for their school attendance were enacted by Rhode Island in 1840, and Massachusetts in 1842. Factory legislation in other countries has been a product of more recent forces and times.

To-day important child-labor legislation has been enacted by all progressive nations, and the leading world nations have taken

advanced ground on the question. All recent thinking is opposed to children engaging in productive labor. With the rise of organized labor, and the extension of the suffrage to the laboring man, he has joined the humanitarians in opposition to his children being permitted to labor. From an economic point of view also, all recent studies have shown the unprofitableness of child labor and the large money-value, under present industrial conditions, of a good education. As a result of much agitation and the spread of popular education, it has at last come to be a generally accepted principle (**R. 374**) that it is better for children and better for society that they should remain in school until they are at least fourteen years of age, and be specially trained for some useful type of work. Shown to be economically unprofitable, and for long morally indefensible, child labor is now rapidly being superseded by suitable education and the vocational training and guidance of youth in all progressive nations.

Compulsory school-attendance legislation. The natural corollary of the taxation of the wealth of the State to educate the children of the State, and the prohibition of children to labor, is the compulsion of children to attend school that they may receive the instruction and training which the State has deemed it wise to tax its citizens to provide.

Except in the German States, compulsory education is a relatively recent idea, though in its origins it is a child of the Protestant Reformation theory as to education for salvation. Luther and his followers had stood for the education of all, supported by (**R. 156**) and enforced by (**R. 158**) the State. This idea of the education of all to read the Bible took deep root, as we have seen, with both Lutherans and Calvinists. In 1619 the little Duchy of Weimar made the school attendance of all children, six to twelve years of age, compulsory, and the same idea was instituted in Gotha by Duke Ernest (p. 317), in 1642; the same year that the Massachusetts General Court ordered the Selectmen of the towns to ascertain if parents and the masters of apprentices (**R. 190**) were training their children "in learning and labor" and "to read and understand the principles of religion and the capital laws of the country." This latter law is remarkable in that, for the first time in the English-speaking world, a legislative body representing the State ordered that all children should be taught to read. Five years later (1647) the Massachusetts Court ordered the establishment of schools (**R. 191**) better to enforce the compulsion,

and thus laid the foundations upon which the American public-school systems have since been built. In Holland, the Synod of Dort (1618) had tried to institute the idea of compulsory education (**R. 176**), and in 1646 the Scotch Parliament had ordered the compulsory establishment of schools (**R. 179**).

In German lands the compulsory-attendance idea took deep root, and in consequence the Germans were the first important modern nation to enforce, thoroughly, the education of all. In 1717 King Frederick William I issued (p. 555) the first compulsory-education law for Prussia, ordering that "hereafter wherever there are schools in the place the parents shall be obliged, under severe penalties, to send their children to school, . . . daily in winter, but in summer at least twice a week." He further ordered that the fees for the poor were to be paid "from the community's funds." Finally Frederick the Great organized the earlier procedure into comprehensive codes, and made (1763, **R. 274, § 10**; 1765, **R. 275 d**) detailed provisions relating to the compulsion to attend the schools. In the Code of 1794 (p. 565) the final legislative step was taken when it was ordered that "the instruction in school must be continued until the child is found to possess the knowledge necessary to every rational being." By the middle of the eighteenth century the basis was clearly laid in Prussia for that enforcement of the compulsion to attend schools which, by the middle of the nineteenth century, had become such a notable characteristic of all German education. The same compulsory idea early took deep root among the Scandinavian peoples. In consequence the lowest illiteracy in Europe, at the beginning of the nineteenth century, was to be found (see map, p. 714) among the Finns, Swedes, Norwegians, Danes, and Germans.

The compulsory-attendance idea died out in America, in the Netherlands, and in part in Scotland. In England and in the Anglican Colonies in America it never took root. In France the idea awaited the work of the National Convention, which (1792) ordered three years of education compulsory for all. War and the lack of interest of Napoleon in primary education caused the requirement, however, to become a dead letter. The Law of 1833 provided for but did not enforce it, and real compulsory education in France did not come until 1882. In England the compulsory idea received but little attention until after 1870, met with much opposition, and only recently have comprehensive reforms been provided. In the United States the new beginnings of compul-

sory-attendance legislation date from the Rhode Island child-labor law of 1840, and the first modern compulsory-attendance law enacted by Massachusetts, in 1852. By 1885, fourteen American States and six Territories had enacted some form of compulsory-attendance law. Since 1900 there has been a general revision of American state legislation on the subject, with a view to increasing and the better enforcement of the compulsory-attendance requirements, and with a general demand that the National Congress should enact a national child-labor law.

As a result of this legislation the labor of young children has been greatly restricted; work in many industries has been prohibited entirely, because of the danger to life and health; compulsory education has been extended in a majority of the American States to cover the full school year; poverty, or dependent parents, in many States no longer serves as an excuse for non-attendance; often those having physical or mental defects also are included in the compulsion to attend, if their wants can be provided for; the school census has been changed so as to aid in the location of children of compulsory school-attendance age; and special officers have been authorized or ordered appointed to assist school authorities in enforcing the compulsory-attendance and child-labor laws. Having taxed their citizens to provide schools, the different States now require children to attend and partake of the advantages provided. The schools, too, have made a close study of retarded pupils, because of the close connection found to exist between retardation in school and truancy and juvenile delinquency.

One result of this legislation. One of the results of all this legislation has been to throw, during the past quarter of a century, an entirely new burden on schools everywhere. Such legislation has brought into the schools not only the truant and the incorrigible, who under former conditions either left early or were expelled, but also many children who have no aptitude for book learning, and many of inferior mental qualities who do not profit by ordinary classroom procedure. Still more, they have brought into the school the crippled, tubercular, deaf, epileptic, and blind, as well as the sick, needy, and physically unfit. By steadily raising the age at which children may leave school, from ten or twelve up to fourteen and sixteen, schools everywhere have come to contain many children who, having no natural aptitude for study, would at once, unless specially handled, become a nuisance in the

school and tend to demoralize schoolroom procedure. These laws have thrown upon the school a new burden in the form of public expectancy for results, whereas a compulsory-education law cannot create capacity to profit from education. Under the earlier educational conditions the school, unable to handle or educate such children, dealt with them much as the Church of the time dealt with religious delinquents. It simply expelled them or let them drop from school, and no longer concerned itself about them. To-day the public expects the school to retain and get results with them. Consequently, within the past twenty-five years the whole attitude of the school toward such children has undergone a change; many different kinds of classes and courses, that might serve better to handle them, have been introduced; and an attempt has been made to salvage them and turn back to society as many of them as possible, trained for some form of social and personal usefulness.

The education of defectives. Another nineteenth-century expansion of state education has come in the provision now generally made for the education of defectives. To-day the state school systems of Christian nations generally make some provision for state institutional care, and often for local classes as well, for the training of children who belong to the seriously defective classes of society. This work is almost entirely a product of the new humanitarianism of modern times. Excepting the education of the deaf, seriously begun a little earlier, all effective work dates from the first half of the nineteenth century. At first the feasibility of all such instruction was doubted, and the work generally was commenced privately. Out of successes thus achieved, public institutions have been built up to carry on, on a large scale, what was begun privately on a small scale. It is now felt to be better for the State, as well as for the unfortunates themselves, that they be cared for and educated, as suitably and well as possible, for self-respect, self-support, and some form of social and vocational usefulness. In consequence, the compulsory-attendance laws of the leading world States to-day require that defectives, between certain ages at least, be sent to a state institution or be enrolled in a public-school class specialized for their training.

Beginnings of the work. Up to the middle of the eighteenth century a number of private efforts at the education of the deaf are on record, all dating however from the pioneer work of a Span-

ish Benedictine, in 1578. In 1760 a new era in the education of the deaf was begun when Abbé de l'Épée opened a school at Paris for the oral instruction of poor deaf mutes, and Thomas Braidwood (1715–1806) began similar work at Edinburgh. A few years later (1778) a third school was opened at Leipzig. This last was established under the patronage of the Elector of Saxony, and was the first school of its kind in the world to receive government recognition. The Paris school was taken over as a state institution by the Constituent Assembly, in 1791. In England the instruction of the deaf remained a private and a family monopoly until 1819. In 1817 the first school in America was opened, at Hartford, Connecticut, by the Reverend Thomas H. Gallaudet, and Massachusetts, in 1819, sent the first pupils paid for at state expense to this institution. In 1823 Kentucky created the first state school for the training of the deaf established in the new world, and Ohio the second, in 1827.



FIG. 235.
ABBÉ DE L'ÉPÉE
(1712–89)



FIG. 236. REV. THOMAS H. GALLAUDET TEACHING THE DEAF AND DUMB

From a bas-relief on the monument of Gallaudet, erected by the deaf and dumb of the United States, in the grounds of the American Asylum, at Hartford, Connecticut.

The education of the blind began in France, in 1784; England, in 1791; Austria, in 1804; Prussia, in 1806; Holland, in 1808; Sweden, in 1810; Denmark, in 1811; Scotland, in 1812; in Boston and New York, in 1832; and in Philadelphia, in 1833. All were private institutions, and general interest in the education of the blind was awakened later by exhibiting the pupils trained. The first book for the blind was printed in Paris, in 1786. The first kindergarten for the blind was estab-

lished in Germany, in 1861; the first school for the colored blind, by North Carolina, in 1869.

Before the nineteenth century the feeble-minded and idiotic were the laughing-stock of society, and no one thought of being able to do anything for them. In 1811 Napoleon ordered a census of such individuals, and in 1816 the first school for their training was opened at Salzburg, Austria. The school was unsuccessful, and closed in 1835. The real beginning of the training of the feeble-minded was made in France, by Édouard Seguin, "The Apostle of the Idiot," in 1837, when he began a life-long study of such defectives. By 1845 three or four institutions had been opened in Switzerland and Great Britain for their study and training, and for a time an attempt was made to effect cures. Gallaudet had tried to educate such children at Hartford, about 1820, and a class for idiots was established at the Blind Asylum in Boston, in 1848. The interest thus aroused led to the creation of

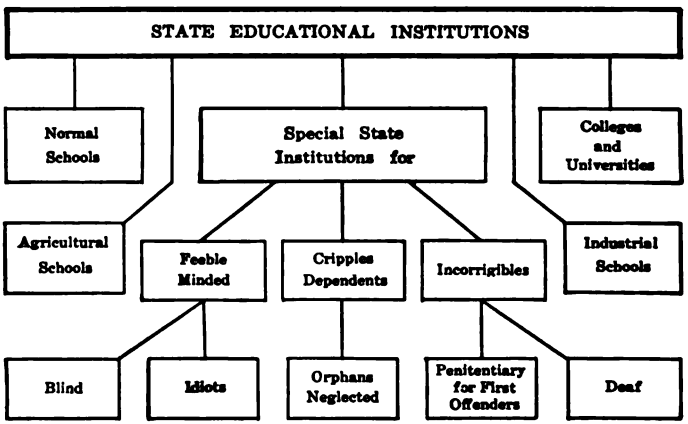


FIG. 237. EDUCATIONAL INSTITUTIONS MAINTAINED BY THE STATE
As state institutions, other than public schools.

the Massachusetts School for Idiotic and Feeble-Minded Youth, in 1851, the first institution of its kind in the United States. In 1867 the first city school class to train children of low-grade intelligence was organized in Germany, and all the larger cities of Germany later organized such special classes. Norway followed with a similar city organization, in 1874; and England, Switzerland, and Austria, about 1892. The first American city to organize such classes was Providence, Rhode Island, in 1893. Since that time special classes for children of low-grade mentality have

become a common feature of the large city school systems in most American cities.

In 1832 the first attempt to educate crippled children, as such, was made in Munich. The model school in Europe for the education of cripples was established in Copenhagen, in 1872. The work was begun privately in New York City, in 1861, and first publicly in Chicago, in 1899. The London School Board first began such classes in England, in 1898.

Dependents, orphans, children of soldiers and sailors, and incorrigibles of various classes represent others for whom modern States have now provided special state institutions. To-day a modern State finds it necessary to provide a number of such specialized institutions, or to make arrangements with neighboring States for the care of its dependents, if it is to meet what have come to be recognized as its humanitarian educational duties. The more important of these special state institutions are shown in the diagram given in Fig. 237.

Public playgrounds and play directors, vacation schools, juvenile courts, disciplinary classes, parental schools, classes for mothers, visiting home-teachers and nurses, and child-welfare societies and officers, are other means for caring for child life and child welfare which have all been begun within the past half-century. The significance of these additions lies chiefly in that the history of the attitude of nations toward their child life is the history of the rise of humanitarianism, altruism, justice, order, morality, and civilization itself.

The education of superior children. All the work described above and relating to the work of defectives, delinquents, and children for some reason in need of special attention and care has been for those who represent the less capable and on the whole less useful members of society — the ones from whom society may expect the least. They are at the same time the most costly wards of the State.

Wholly within the second decade of the present century, and largely as a result of the work of the French psychologist Alfred Binet (1857–1911) we are now able to sort out, for special attention, a new class of what are known as superior, or gifted children, and to the education of these special attention is to-day here and there beginning to be directed. Educationally, it is an attempt to do for democratic forms of national organization what a two-class school system does for monarchical forms, but to select intellec-

tual capacity from the whole mass of the people, rather than from a selected class or caste. We know now that the number of children of superior ability is approximately as large as the number of the feeble in mind, and also that the future of democratic governments hinges largely upon the proper education and utilization of these superior children. One child of superior intellectual capacity, educated so as to utilize his talents, may confer greater benefits upon mankind, and be educationally far more important, than a thousand of the feeble-minded children upon whom we have recently come to put so much educational effort and expense. Questions relating to the training of leaders for democracy's service attain new significance in terms of the recent ability to measure and grade intelligence, as also do questions relating to grading, classification in school, choice of studies, rate of advancement, and the vocational guidance of children in school.

The new interest in health. Another new expansion of the educational service which has come in since the middle of the nineteenth century, and which has recently grown to be one of large significance, is work in the medical inspection of schools, the supervision of the health of pupils, and the new instruction in preventive hygiene. This is a product of the scientific and social and industrial revolutions which the nineteenth century brought, rather than of humanitarian influences, and represents an application of newly discovered scientific knowledge to health work among children. Its basis is economic, though its results are largely physical and educational and social (**R. 375**).

Net Average Worth of a Person

Age	*Worth*
0	$90
5	950
10	2000
20	4000
30	4100
40	3650
50	2900
60	1650
70	15
80	−700

(Calculations by Dr. William Farr, formerly Registrar of Vital Statistics for Great Britain. Based on pre-war values.)

The discovery and isolation of bacteria; the vast amount of new knowledge which has come to us as to the transmission and possibilities for the elimination of many diseases; the spread of information as to sanitary science and preventive medicine; the change in emphasis in medical practice, from curative to preventive and remedial; the closer crowding together of all classes of people in cities; the change of habits for many from life in the open to life in the factory, shop, and apartment; and the growing realization of the economic value to the nation of its manhood and womanhood; have all alike combined with modern humani-

tarianism and applied Christianity to make progressive nations take a new interest in child health and proper child development. European nations have so far done much more in school health work than has the United States, though a very commendable beginning has been made here.

Medical inspection and health supervision. Medical inspection of schools began in France, in 1837, though genuine medical inspection, in a modern sense, was not begun in France until 1879. The pioneer country for real work was Sweden, where health officers were assigned to each large school as early as 1868. Norway made such appointments optional in 1885, and obligatory in 1891. Belgium began the work in 1874. Tests of eyesight were begun in Dresden in 1867. Frankfort-on-Main appointed the first German school physician in 1888. England first employed school nurses in 1887; and, in 1907, following the revelations as to low physical vitality growing out of the Boer War, adopted a mandatory medical-inspection and health-development act applying to England and Wales, and the year following Scotland did the same. Argentine and Chili both instituted such service in 1888, and Japan made medical inspection compulsory and universal in 1898.

In the United States the work was begun voluntarily in Boston, in 1894, following a series of epidemics. Chicago organized medical inspection in 1895, New York City in 1897, and Philadelphia in 1898. From these larger cities the idea spread to the smaller ones, at first slowly, and then very rapidly. The first school nurse in the United States was employed in New York City, in 1902, and the idea at once proved to be of great value. In 1906 Massachusetts adopted the first state medical inspection law. In 1912 Minnesota organized the first "State Division of Health Supervision of Schools" in the United States, and this plan has since been followed by other States.

From mere medical inspection to detect contagious diseases, in which the movement everywhere began, it was next extended to tests for eyesight and hearing, to be made by teachers or physicians, and has since been enlarged to include physical examinations to detect hidden diseases and a constructive health-program for the schools. The work has now come to include eye, ear, nose, throat, and teeth, as well as general physical examinations; the supervision of the teaching of hygiene in the schools, and to a certain extent the physical training and playground activities; and a

constructive program for the development of the health and physical welfare of all children. All this represents a further extension of the public-education idea.

V. THE SCIENTIFIC ORGANIZATION OF EDUCATION

An important recent development in the field of public education, and in a sense an outgrowth of all the preceding recent development which we have described, has been the organization of collegiate and university instruction in the history, theory, practice, and administration of education. Still more recent has been the organization of Teachers' Colleges and Schools of Education to give advanced training in educational research and in the solution of the practical problems of school organization and administration. So important has this recent development become that no history of educational progress would be complete without at least a brief mention of this recent attempt to give scientific organization to the educational process.

Early beginners. Though the teachers' seminaries had been organized in Germany and other northern lands toward the close of the eighteenth century, the normal school in France early in the nineteenth, and the training-college in England and the normal school in the United States by the close of the first third of that century, the work in these remained for a long time almost entirely academic in nature and elementary in character. This was also true of the superior normal school for training teachers for the *lycées* of France.

The reason for this is easy to find. The writings of the earlier educational reformers were little known; the contributions of Herbart and Froebel had not as yet been popularized; there was no organized psychology of the educational process, and no psychology better than that of John Locke; the detailed Pestalozzian procedure had not as yet been worked out in the form of teaching technique; the history of the development of educational theory or of educational practice had not been written; and almost no philosophy of the educational purpose had been formulated which could be used in the training-schools. In consequence the training of teachers, both for elementary and secondary instruction,[1]

[1] An exception to this statement is to be found in the work of the Pedagogical Seminars, organized in the German universities in the second decade of the nineteenth century, which were intended for the professional training of German university students for teaching in the German secondary schools. (See footnote 1, page 573.)

was almost entirely in academic subjects, with some talks on school-keeping and class organization and management added, and at times a little philosophy as to educational work, such as habit-formation, morality, thinking, and the training of the will. Educational journalism did not begin in either Europe or America until near the close of the first quarter of the nineteenth century, and it was 1850 before it attained any significance, and 1840 to 1850 before any important pedagogical literature arose.[1]

New influences. In 1843 there appeared, in Germany, the first two volumes of a very celebrated and influential History of Education, by a professor of mineralogy in the University of Erlangen, by the name of Karl Georg von Raumer. As a young man in Paris (1808–09), studying the great mineral collections found there, he read and was deeply stirred by Fichte's "Address to the German Nation" (p. 567). As a result he went to Yverdon, in 1809, and spent some months in studying the work in Pestalozzi's Institute. This interest in education he never lost, and thereafter, as professor of mineralogy at Halle and Erlangen, he also gave lectures on pedagogy (*Über Pädagogik*). The outgrowth of these lectures was his four-volume *History of Pedagogy from the Revival of Classical Studies to our own Time.*[2] The work was done with characteristic German thoroughness, and for long served as a standard organization and text on the history of the development of educational theory and practice since the days of the Revival of Learning. The work of von Raumer stimulated many to a study of the writings of the earlier educational re-



FIG. 238
KARL GEORG VON RAUMER
(1783–1865)

[1] When the first teachers' training-school in America was opened at Concord, Vermont, by the Reverend Samuel R. Hall, in 1823, it included, besides a three-year academy-type academic course, practice teaching in a rural school in winter, and some lectures on the "Art of Teaching." Without a professional book to guide him, and relying only upon his experience as a teacher, Hall tried to tell his pupils how to organize and manage a school. To make clear his ideas he wrote out a series of *Lectures on Schoolkeeping*, which some friends induced him to publish. This, the first professional book in English issued in America for teachers, appeared in 1829.

[2] *Geschichte der Pädagogik vom Wiederaufblühen klassicher Studien bis auf unsere Zeit.* Vols. I and II, 1843; vol. III, 1847; vol. IV, 1855. Much of this was translated into other languages. Barnard's *American Journal of Education*, begun in 1855, published a translation of much of von Raumer's work for American readers.

formers, and numerous books and papers on educational history and theory soon began to appear. Most important, for American students, was Henry Barnard's monumental *American Journal of Education*, begun in 1855, and continued for thirty-one years. This is a great treasure-house of pedagogical literature for American educators.

After 1850 the organization of a technique of instruction for the elementary-school subjects took place rapidly, in the normal schools of all lands, as it had earlier in the German teachers' seminaries. By 1868 the study of the new Herbartian psychology and educational theory was well under way in Germany, and by 1890 in the United States. By 1875 the kindergarten, with its new theory of child life, was also beginning to make itself felt in both Europe and America. Between 1850 and 1875 Weber, Lotze, Fechner, and Wundt laid the foundations for a new psychology (**R. 357**), and in 1878 Wundt opened the first laboratory for the experimental study of psychology at the University of Leipzig. In 1890 William James published his two-volume work on *Principles of Psychology*, a book so original and lucid in treatment that it at once gave a new teaching organization to modern psychology. After about 1880, the extension of education upward and outward in the United States, and the rapid development of state school systems which had by that time begun, began to make new demands for better scientific and legal and administrative organization, and this gave rise to a new type of educational literature.

After von Raumer's work, probably the greatest single stimulative influence of the mid-nineteenth century was that exerted by the marked successes of the Prussian armies in a series of short but very decisive wars. Against Denmark (1864) and Austria (1866), but in particular in the Franco-Prussian War of 1870–71, the Prussian armies proved irresistible. These military operations attracted new attention to education, and "the Prussian schoolmaster has triumphed" became a common world saying. This, coupled with the remarkable national development of United Germany which almost immediately set in, caused progressive nations to turn to the study of education with increased interest. The English and Scottish universities now began to establish lectureships in the theory and history of education,[1] and

[1] In 1876 S. S. Laurie (1829–1909) was elected to one of the first chairs in education in Great Britain, that of "Professor of the Theory, History, and Practice of Education" in the University of Edinburgh.

the first university chairs in education in the United States were founded.

The university study of education. In no country in the world have the universities, within the past three decades, given the attention to the study of Education — a term that in English-speaking lands has replaced the earlier and more limited "Pedagogy" — that has been given in the United States.[1] After the United States the newer universities of England probably come next. Up to 1890 less than a dozen chairs of education had been established in all the colleges of the United States, and their work was still largely limited to historical and philosophical studies of education, and to a type of classroom methodology and school management, since almost entirely passed over to the normal schools. By 1920 there were some four hundred colleges in the United States giving serious courses on educational history and procedure and administration, many of them maintaining large and important professional Schools of Education for the more scientific study of the subject, and for the training of leaders for the service of the nation's schools.

In the great advances which have taken place in the organization of education, during these three decades, no institution in the world has exerted a more important influence than has "Teachers College," Columbia University, in the City of New York, which was organized in 1887 as "The New York College for the Training of Teachers," but since 1890 has been affiliated with Columbia University, under its present name. This institution has been a model copied by many others over the world; has trained a large percentage of the leaders in education in the United States; and has been particularly influential with students from England, the English self-governing dominions, China, and South America.

To-day, in all the state universities and in many non-state institutions in the United States, we find well-organized Teachers' Colleges engaged in a work which two decades ago was being at-

[1] Probably the first lectures on Pedagogy given in any American college were given in 1832, in what is now New York University. From 1850 to 1855 the city superintendent of schools of Providence, Rhode Island, was Professor of Didactics, in Brown University. In 1860 a course of lectures on the "Philosophy of Education, School Economy, and the Teaching Art" was given to the seniors of the University of Michigan. In 1873 a Professorship of Philosophy and Education was established in the University of Iowa. This was the first permanent chair created in America. In 1870 a Department of the Science and Art of Teaching was created at the University of Michigan. In 1881 a Department of Pedagogy was created at the University of Wisconsin, and in 1884 similar departments at the University of North Carolina and at Johns Hopkins University.

tempted by but a few institutions anywhere. In the municipal universities of England, in Canada, in Japan and China, and in other democratic lands, we find the beginnings of a similar development of the scientific study of education. In these Schools or Colleges for the scientific study of education the best thinking on the problems of the reorganization and administration of education, and the most new and creative work, has been and is being done.[1]

The problems of the present. Pestalozzi dreamed that he might be able to psychologize instruction and reduce all to an orderly procedure, which, once learned, would make one a master teacher. What he was not able to accomplish he died thinking others after him would do. The problem of education has had, with time, no such simple and easy solution. Instead, with the development of state school systems, the extension of education in many new directions to meet new needs, and the application to the study of education of the same scientific methods which have produced such results in other fields of human knowledge, we have come to-day to have hundreds of problems, many of which are complex and difficult and which influence deeply the welfare of society and the State. That these problems, even with time, will receive any such simple solution as that of which Pestalozzi dreamed, may well be doubted. In the days of church control, memoriter instruction, and a school for religious ends, education was a simple matter; to-day it partakes of the difficulty and complexity which characterize most of the problems of modern world States. In consequence of this important change in the character of education a great number of important problems in educational organization, practice, and procedure now face us for solution.

Space can here be taken to mention only the more prominent of these present-day educational problems. On the administrative side is a whole group of problems relating to forms of organization: the proper educational relationships between the State and its subordinate units; the development of a state educational policy: the types of instruction the State must provide, and compel attendance upon; questions of taxation and support, compulsory attendance, and child labor; the training and oversight of teachers for the service of the State; problems of child health and welfare; the provision of adequate and professional supervision;

[1] In education, as in other lines of work, the statement of Richard H. Quick that the distinctive function of a university is not action, but thought, has been exemplified.

the provision of continuation schools, and of industrial and vocational training; the supervision of school buildings for health and sanitary control; and the relation of the State to private and parochial education. The problem of how to produce as effective and as thorough education for leadership with a one-class school system as with a two-class; the opening-up of opportunity for youth of brains in any social class to rise and be trained for service; the selection and proper training of those of superior intelligence; the elimination of barriers to the advancement of children of large intellectual endowment; and what best to do with those of small intellectual capacity, form another important group of present-day educational problems. Vocational training and technical education, and the relation and the proper solution of these questions to national happiness and prosperity and human welfare, form still another important group. The many questions which hinge upon instruction; the elimination of useless subject-matter; the best organization of instruction; proper aims and ends; moral and civic training; the most economical organization of school work; the saving of time; and what are desirable educational reorganizations, all these form a group of instructional problems of large significance for the future of public education. Still more in detail, but of large importance, are the questions relating to the scientific measurement of the results of instruction; the erection of attainable goals in teaching; and the introduction of scientific accuracy into educational work. Still another important group of problems relates to the readjustment of inherited school organization and practices, the better to meet the changed and changing conditions of national life — social, industrial, political, religious, economic, scientific — brought about by the industrial and social and scientific and political revolutions which have taken place.

These represent some of the more important new problems in education which have come to challenge us since the school was taken over from the Church and transformed into the great constructive tool of the State. Their solution will call for careful investigation, experimentation, and much clear thinking, and before they are solved other new problems will arise. So probably it will ever be under a democratic form of government; only in autocratic or strongly monarchical forms of government, where the study of problems of educational organization and adjustment are not looked upon with favor, can a school system to-day

remain for long fixed in type or uniform in character. Education to-day has become intricate and difficult, requiring careful professional training on the part of those who would exercise intelligent control, and so intimately connected with national strength and national welfare that it may be truthfully said to have become, in many respects, the most important constructive undertaking of a modern State.

QUESTIONS FOR DISCUSSION

1. Show that education must be extended and increased in efficiency in proportion as the suffrage is extended, and additional political functions given to the electorate. Illustrate.
2. Trace the changes in the character of the instruction given in the schools, paralleling such changes.
3. Explain the difference in use of the schools for nationality ends in Germany and France.
4. Of what is the recent development of evening, adult, and extension education an index?
5. Show why university education is more important in national life to-day than ever before in history.
6. Compare the rate of development of universities during the nineteenth century, and all time before the nineteenth. Of what is the difference in rate an index?
7. Explain why Americans have been less successful in introducing science instruction into their schools than have the Germans. Agriculture than the French.
8. Explain the breakdown of the old apprenticeship education.
9. Explain the American recent rapid acceptance of the agricultural high school, whereas the agricultural colleges for a long time faced opposition and lack of interest and support.
10. Explain the continued emphasis of high-school studies leading to the professions rather than the vocations, though so small a percentage of people are needed for professional work.
11. In Germany this was largely regulated by the Government; show how it would be much easier there than in the United States.
12. Show why European nations would naturally take up vocational training ahead of the United States, Canada, Australia, or South America.
13. Explain the reasons for the new conceptions as to the value of childlife which have come within the past hundred years, in all advanced nations. Why not in the less advanced nations?
14. Show the relation between the breakdown of the apprentice system, the Industrial Revolution, and the rise of compulsory school attendance.
15. Show that compulsory school attendance is a natural corollary to general taxation for education.
16. How do you account for the relatively recent interest in the education of defectives and delinquents? Of what is this interest an expression?
17. Does the obligation assumed to educate involve any greater exercise of state authority or recognition of duty than the advancement of the health of the people and the sanitary welfare of the State?
18. What additional unsolved problems would you add to the list given on the preceding page?

SELECTED READINGS

In the accompanying *Book of Readings* the following selections illustrative of the contents of this chapter are reproduced:

367. McKechnie, W. S.: The Environmental Influence of the State.
368. Emperor William II.: German Secondary Schools and National Ends.
369. Van Hise, Chas. R.: The University and the State.
370. Friend: What the Folk High Schools have done for Denmark.
371. U.S. Commission: The German System of Vocational Education.
372. U.S. Commission: Vocational Education and National Prosperity.
373. de Montmorency: English Conditions before the First Factory-Labor Act.
374. Giddings, F. R.: The New Problem of Child Labor.
375. Hoag, E. B., and Terman, L. M.: Health Work in the Schools.

QUESTIONS ON THE READINGS

1. Explain why it is now so important that the State properly environ (**367**) its youth.
2. What were the actuating motives behind the German Emperor's speech (**368**)? Was he right in his position as to the relation of the schools and national needs and welfare?
3. Explain Van Hise's conception (**369**) that the university is "The Soul of the State."
4. Does Denmark form any exception as to what might be done (**370**) in any country, such as Russia? Mexico?
5. Show that the results justified the German emphasis (**371**) on vocational training. How do you explain this German far-sightedness?
6. What will be the result when many nations (**372**) become highly skilled?
7. Show the growth of humanitarian influences by contrasting conditions in England in 1802 (**373**), and conditions to-day.
8. Would the English 1802 conditions be found in any Christian land to-day? Why?
9. Show that the child-labor problem (**374**) is a product of the Industrial Revolution.
10. Viewed in the light of history, what would we say of the present opposition to health work (**375**) in the schools?

SUPPLEMENTARY REFERENCES

*Allen, E. A. "Education of Defectives"; in Butler, N. M., *Education in the United States*, pp. 771–820.
Barnard, Henry. *National Education in Europe.*
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Farrington, F. E. *Commercial Education in Germany.*
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Friend, L. L. *The Folk High Schools of Denmark.* (Bulletin No. 3, 1914, United States Bureau of Education.)
*Hoag, E. B., and Terman, L. M. *Health Work in the Schools.*
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*Munroe, J. P. *New Demands in Education.*
*Payne, G. H. *The Child in Human Progress.*
Smith, A. T., and Jesien, W. S. *Higher Technical Education in Foreign Countries.* (Bulletin No. 11, 1917, United States Bureau of Education.)
Snedden, D. S. *Vocational Education.*
*Terman, L. M. *The Intelligence of School Children.*
Waddle, C. W. *Introduction to Child Psychology*, chap. I.
Ware, Fabian. *Educational Foundations of Trade and Industry.*

CONCLUSION; THE FUTURE

We have now reached the end of the story of the rise and progress of man's conscious effort to improve himself and advance the welfare of his group by means of education. To one who has followed the narrative thus far it must be evident how fully this conscious effort has paralleled the history of the rise and progress of western civilization itself. Beginning first among the Greeks — the first people in history to be "smitten with the passion for truth," the first possessing sufficient courage to put faith in reason, and the first to attempt to reconcile the claims of the State and the individual and to work out a plan of "ordered liberty" — a new spirit was born and in time passed on to the western world. As Butcher well says (R. 11), "the Greek genius is the European genius in its first and brightest bloom, and from a vivifying contact with the Greek spirit Europe derived that new and mighty impulse which we call Progress." Hellenizing first the Eastern Mediterranean, and then taking captive her rude conqueror, the Hellenization of the Roman and early Christian world was the result.

Then followed the reaction under early Christian rule, and the fearful deluge of barbarism which for centuries well-nigh extinguished both the ancient learning and the new spirit. Finally, after the long mediæval night, came "time's burst of dawn," first and for a long time confined to Italy, but later extending to all northern lands, and in the century of revival and rediscovery and reconstruction the Greek passion for truth and the Greek courage to trust reason were reawakened, and once more made the heritage of the western world. Once again the Greek spirit, the spirit of freedom and progress and trust in the power of truth, became the impulse that was to guide and dominate the future. To follow reason without fear of consequences, to substitute scientific for empirical knowledge, to equip men for intelligent participation in civic life, to discover a rational basis for conduct, to unfold and expand every inborn faculty and energy, and to fill man with a restless striving after an ideal — these essentially Greek characteristics in time came to be accepted by an increasing number of modern men, as they had been by the thoughtful men of the ancient Greek world, as the law and goal of human endeavor. From

this point on the intellectual progress of the western world was certain, though at times the rate seems painfully slow.

The great events which stand out in modern history — milestones, as it were, along the road of the intellectual progress of mankind in the recovery of the Greek spirit — were the revival of the ancient learning, the Protestant appeal to reason, the recovery and vast extension of the old scientific knowledge, the assertion of the rights of the individual as opposed to the rights of the State, and the growth of a new humanitarianism, induced by the teachings of Christianity, which has softened old laws and awakened a new conception of the value of child and human life. Out of these great historic movements have come modern scholarship, the inestimable boon of religious liberty, the firm establishment of the idea of the reign of law in an orderly universe, the conception of government as in the interests of the governed, the substitution of democracy and political equality for the rule of a class or an autocratic power, and the assertion of the right to an education at public expense as a birthright of every child. The common school, the education of all, equality of rights and opportunity, full and equal suffrage, the responsibility of all for the advancement of the common welfare, and liberty under law have been the natural consequences and the outcome of these great struggles to set free and quicken the human spirit.

The Peace of Westphalia (1648), which marked the close of a century of effort to crush human reason and religious liberty with violence and oppression, marked a turning-point in the history of the world. Though religious intolerance and bigotry might still persist in places for centuries to come, this Peace acknowledged the futility of persecution to stamp out human inquiry, and marked the downfall of intellectual mediævalism. The work of the political philosophers of the eighteenth century, the establishment of a new political ideal by the leaders of the American Revolution, and the drastic sweeping-away of ancient abuses in Church and State in the Revolution in France, applied a new spirit to government, ushered in the rule of the common man, and began the establishment of democracy as the ruling form of government for mankind. The recent World War in Europe was in a sense a sequel to what had gone before. One result of its outcome, despite certain reactionary but temporary old-type governments that the near future may see set up in places, has been the elimination of the mediæval theory of the "divine right of

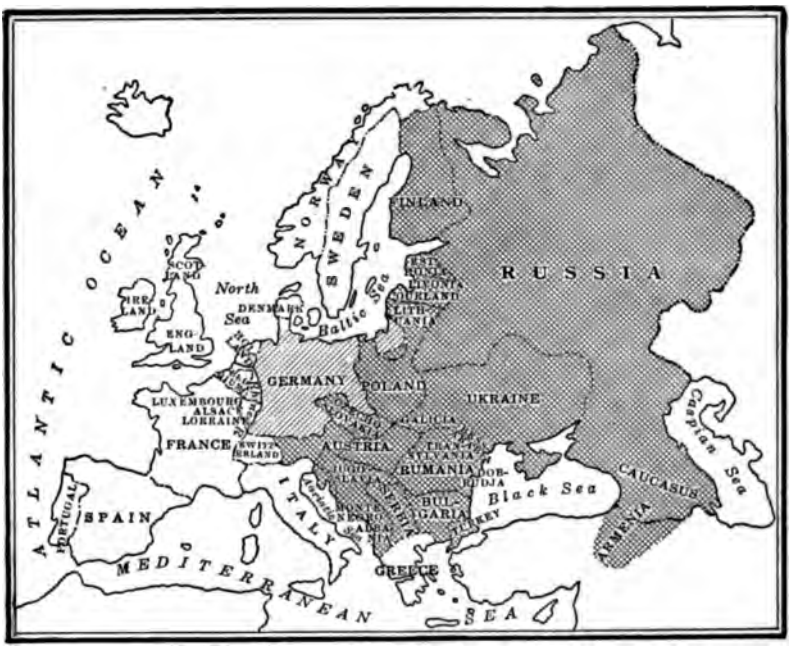


FIG. 239. THE ESTABLISHED AND EXPERIMENTAL NATIONS OF EUROPE
The established nations are in white; the experimental nations shaded. After a time Germany should become white also.

kings" from the continent of Europe, and the establishment of the democratic type of government as the ruling type of the future. Some of the nations for a time will be in a sense experimental, as shown on the above map, and even well-governed Germany must learn new forms and ways, but in time government of and by and for the people is practically certain to become established everywhere on the continent of Europe.

Still more, the outcome of the World War would seem to indicate that democratic forms of government are destined in time to extend to peoples everywhere who have the capacity for using them. The great problem of the coming century, then, and perhaps even of succeeding centuries, will be to make democracy a safe form of government for the world. This can be done only by a far more general extension of educational opportunities and advantages than the world has as yet witnessed. In the hands of an uneducated proletariat democracy is a dangerous instrument. In Russia, Mexico, and in certain of the Central American Republics

we see what a democracy results in in the hands of an uneducated people. There, too often, the revolver instead of the ballot box is used to settle public issues, and instead of orderly government under law we have a reign of injustice and anarchy. Only by the slow but sure means of general education of the masses in character and in the fundamental bases of liberty under law can governments that are safe and intelligent be created. In a far larger sense than anything we have as yet witnessed, education must become the constructive tool for national progress.

The great needs of the modern world call for the general diffusion among the masses of mankind of the intellectual and spiritual and political gains of the centuries, which are as yet, despite the great recent progress made in extending general education, the possession of but a relatively small number of the world's population. Among the more important of these are the religious spirit, coupled with full religious liberty and tolerance; a clear recognition of the rights of minorities, so long as they do not impair the advancement of the general welfare; the general diffusion of a knowledge of the more common truths and applications of science, particularly as these relate to personal hygiene, sanitation, agriculture, and modern industrial processes; the general education of all, not only in the tools of knowledge, but in those fundamental principles of self-government which lie at the basis of democratic life; training in character, self-control, and in the ability to assume and carry responsibility; the instilling into a constantly widening circle of mankind the importance of fidelity to duty, truth, honor, and virtue; the emphasis of the many duties and responsibilities which encompass all in the complex modern world, rather than the eighteenth-century individualistic conception of political and personal rights; the clear distinction between liberty and license; and the conception of liberty guided by law. In addition each man and woman should be educated for personal efficiency in some vocation or form of service in which each can best realize his personal possibilities, and at the same time render the largest service to that society of which he forms a part.

The great needs of the modern world also call for that form of education and training which will not merely impart literacy and prepare for economic competence and national citizenship, but which will give to national groups a new conception of national character and international morality and create new standards of value for human effort. National character and international

morality are always the outgrowth of the personality of a people, and this in turn calls for the inculcation of humane ideals, the proper discipline of the instincts, the training of a will to do right, good physical vigor, and, to a large degree, the development of individual efficiency and economic competence. Moral and religious instruction, as it has been given, will not suffice, because it does not reach the heart of the problem. No nation has shown more completely the utter futility of religious instruction to produce morality than has Germany, where the instruction of all in the principles of religion has been required for centuries.

The problem of the twentieth century, then, and probably of other centuries to come, is how the constructive forces in modern society, of which the schools of nations should stand first, can best direct their efforts to influence and direct the deeper sources of the life of a people, so that the national characteristics it is desired to display to the world will be developed because the schools have instilled into every child these national ideals. Many forces must coöperate in such a task, but unless the schools of nations become clearly conscious of national needs and of international purposes, become inspired by an ideal of service for the welfare of mankind, substitute among national groups competition in the things of the spirit — art, architecture, music, sports, education, letters, sanitation, housing, public works, and such applications of science as minister to health and happiness — for competition in the creation of material wealth, the piling-up of armaments, the extension of national boundaries, and the present overemphasis of a narrow nationalism, and direct the energies of coming generations to the carrying-out of this new and larger human service, nations must inevitably fail to reach the world position they might otherwise have occupied, destructive international competition and warfare will continue, and the advancement of world civilization and international well-being will be greatly retarded thereby.

In this work of advancing world civilization, the nations which have long been in the forefront of progress must expect to assume important rôles. It is their peculiar mission — for long clearly recognized by Great Britain and France in their political relations with inferior and backward peoples; by the United States in its excellent work in Cuba, Porto Rico, and the Philippines; and clearly formulated in the system of "mandatories" under the League of Nations — to help backward peoples to advance, and

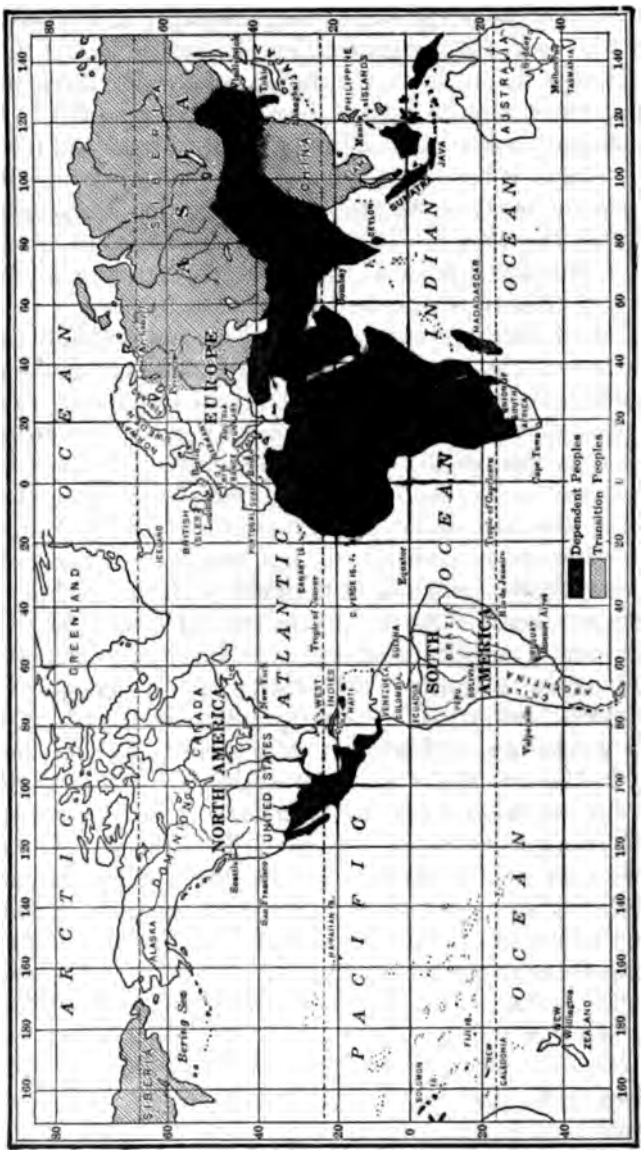


FIG. 240. THE EDUCATIONAL PROBLEMS OF THE FUTURE

Transition peoples are shaded; dependent and backward peoples black. The "mandatories" of the "League of Nations" will be in the black areas, and will have to be carried by the nations which have made the most progress in civilization and shown the highest sense of responsibility for the welfare of peoples that have come under their care. The black areas reveal "The White Man's Burden" of the future.

to assist them in lifting themselves to a higher plane of world civilization. In doing this a very practical type of education must naturally play the leading part, and time, probably much time, will be required to achieve any large results. Disregarding the

large need for such service among the leading world nations, the map reproduced on the opposite page reveals how much of such work still remains to be done in the world as a whole. "The White Man's Burden" truly is large, and the larger world tasks of the twentieth century for the more advanced nations will be to help other peoples, in distant and more backward lands, slowly to educate themselves in the difficult art of self-government, gradually establish stable and democratic governments of their own, and in time to take their places among the enlightened and responsible peoples of the earth.

At the bottom of all this work and service lie the new human-liberty conceptions first worked out and formulated for the world by little Greece. In time the ideas to which they gave expression have become the heritage of what we know as our western civilization, and the warp and woof of the intellectual and political life of the modern world. As a result of the Industrial Revolution, and of the new political and commercial and social forces of our time, this western civilization, using education as its great constructive tool, is now spreading to every continent on the globe. The task of succeeding centuries will be to carry forward and extend what has been so well begun; to level up the peoples of the earth, as far as inherent differences in capacity will permit; and to extend, through educative influences, the principles and practices of a Christian civilization to all. In establishing intelligent and interested government, and in moulding and shaping the destinies of peoples, general education has become the great constructive tool of modern civilization. A hundred and fifty years ago education was of but little importance, being primarily an instrument of the Church and used for church ends. To-day general education is an instrument of government, and is rightfully regarded as a prime essential to good government and national progress. With the spread of the democratic type the importance of the school is enhanced, its control by the State becomes essential, its continued expansion to include new types of schools and new forms of educational opportunities and service a necessity, the study of its organization and administration and problems becomes a necessary function of government, while the training it can give is dignified and made the birthright of every boy and girl.



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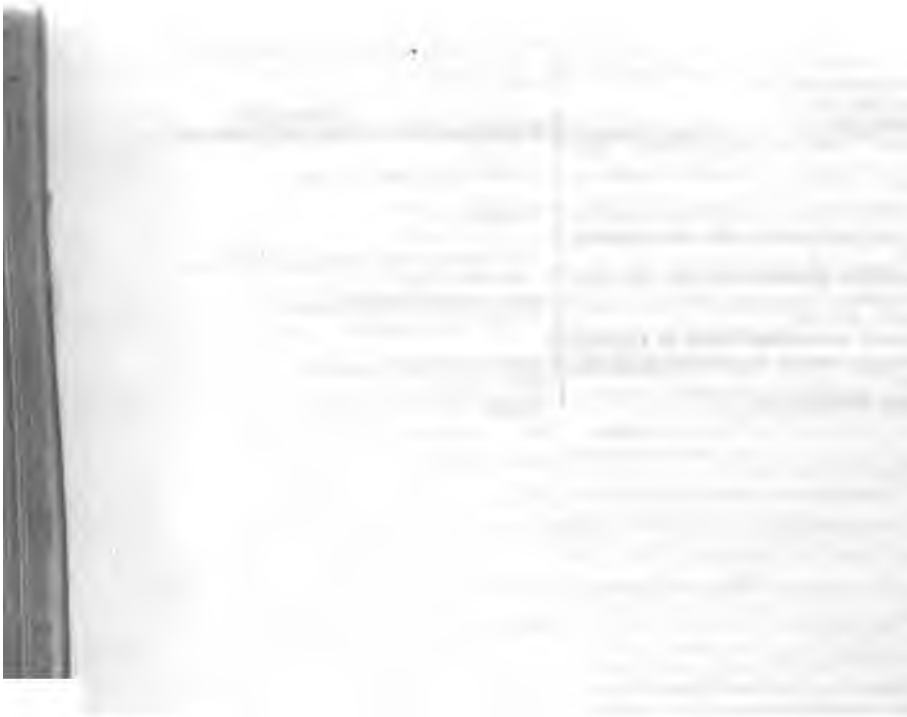
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